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EPHEMERIDES
ASTRONOMICÆ
Anni 1805.

AD

MERIDIANUM VINDOBONENSEM

JUSSU

AUGUSTISSIMI

A

FRANCISCO DE PAULA
TRIESNECKER,
ASTRONOMO CÆS. REGIO UNIVERS.
SOCIETATIS REGIAE SCIENTIARUM, QUAE EST GOTTINGAE, SODALI
ET
JOANNE BÜRG,
ADJUNCTO ASTRONOMIÆ CÆS. REGIO

SUPPUTATÆ.

QUIBUS IN APPENDICE ACCEDUNT

I. De noviſſimo fixarum Catalogo *Piazziano* notitia per Compendium exhibita *a Franciſco Triesnecker.*

II. Novæ Martis Tabulæ cum perturbationibus ejusdem a Schuberto Academico Petropolitano ſtatutis. *Eodem Auctore.*

III. Elevatio Poli Vindobonenſis e Liesganigii obſervationibus vindicata. *Eodem Auctore.*

IV. Elevatio Poli Speculæ Univerſ. Vindobonenſis ope Sextantis anglicani 10 pollicum tentaminis cauſſa explorata *ab eodem Auctore.*

V. Obſervationes aſtronomicæ Viennæ, aliisque in locis habitæ.

VIENNÆ,
TYPIS ET SUMPT. JOAN. THOM. NOB. DE TRATTNERN,
CÆS. REG. MAJ. AULÆ TYPOGRAPHI ET BIBLIOPOLÆ.
MDCCCIV.

PRAEFATIO.

Prodit in lucem annus 1805 Ephemeridum astronomicarum Vindobonensium, ubi in definiendis locis solis & lunæ, reliquorumque planetarum iisdem tabulis, eademque plane methodo usi sumus, quas annis anterioribus adhibendas duximus. Quare supervacaneum hic existimamus, de calculis nostris, eorumque fontibus, unde deducti sunt, uberiorem rationem reddere.

Appendix anni hujus sequentia complectitur:

I. De novissimo fixarum Catalogo *Piazziano* notitiam per compendium exhibitam *a Francisco Triesnecker*. Pag. 237.

II. Novas Martis Tabulas, una cum perturbationibus ejusdem ab Academico Petropolitano Schuberto statutis. *Eodem Auctore*. Pag. 247.

III.

Motus Cereris, cujus calculos in senos quosque dies Cl. Domino Josepho Bede Astronomo Carolinensi eo tempore Viennæ commoranti in acceptis referimus, sub finem appendicis exhibetur. Sed cum orbitæ elementa a Gausio septimum castigata, quibus ii calculi superstructi erant, anno 1803 a cœlo non parum aberrarent, præsumique posset, ea 1805 tanto magis aberratura: nos positionibus a Cl. Bede definitis correctiones quasdam induximus, quas nobis elementa orbitæ propria, a nobis nuperrime investigata suppeditarunt.

Festa

Festa mobilia.		*Cyclorum Numeri.*	
Septuagesima - - -	10 Febr.	Numerus aureus - - - -	1
Dies Cinerum - - -	27 Febr.	Epacta - - - - - - - - - -	*
Pascha - - - - - - -	14 April.	Cyclus Solaris - - - - -	22
Dies Rog. - -	20. 21. 22. Maj.	Indictio Romana - - - -	8
Ascensio Domini -	23 Maj.	Litera Dominicalis - - -	F.
Pentecoste - - - -	2 Jun.		
Dom. SS. Trinit. - -	9 Jun.		
Fest. Corp. Christi	13 Jun.		
Dom. 1: Adventus	1 Dec.		

Quatuor Tempora.

Martii - - - - - - -	6. 8. 9.	Septembris - -	18. 20. 21.
Junii - - - - - - -	5. 7. 8.	Decembris - -	18. 20. 21.

Æquinoctia.	*Solstitia.*
Æquinoctium vernum die 20 Martii hor. 13. m. 59.	Solstitium æstivum die 21 Junii hor. 11. m. 54.
Æquinoctium autumnale die 23 Sept. hor. 1. m. 44.	Solstitium brumale die 21 Dec. hor. 18. m. 16.

Distantiæ Solis a Tellure.

☉ in distantia media die 31 Mart.	☉ in distantia media die 1 Octobris.
☉ in distantia maxima die 1 Julii.	☉ in distantia minima die 31 Decembris.

Obliquitas Eclipticæ apparens.				1805	*Nutatio Longitudinis*	
23°	27′	55″	5	1. Jan.	+ 14″	8.
—	—	54	7	1. Apr.	+ 15	4.
—	—	53	9	1. Jul.	+ 15	8.
—	—	53	2	1. Oct.	+ 16	2.
—	—	52	2	31. Dec.	+ 16	5.

Oc-

Occultationes Fixarum a Luna Viennæ 1805 conſpicuæ.

Januarius.

Die 10. Immerſ. ε ♑ ex part. obſc. hor. 4. min. 46. veſp. Emerſ. ex parte luc. h. 5. m. 16. 53 gr. infr. diam. horiz.

Februarius.

Die 7. Immerſ. η ♉ ex part. obſc. hor. 7. min. 3. veſp. Emerſ. ex part. luc. hor. 8. min. 17. 60 gr. infra diam horiz.

Die 11. Immerſ. δ ♊ ex part. obſc. hor. 4. min. 51. mane. Emerſ. ex part. luc. hor. 5. m. 24. infra horizontem.

Die 21. Immerſ. A ♏ ex part. luc. hor. 4. min. 16. mane. Emerſ. ex parte obſc. hor. 4. min. 53. 84 gr. ſupra diam. horiz.

Martius.

Die 21. Immerſ. α ♏ ex part. luc. hor. 5. min. 37. mane. Emerſ. ex part. obſc. hor. 6. min. 58. 29 gr. infra diam. horiz.

Aprilis.

Die 9. Immerſ. ξ ♌ ex part. obſc. hor. 2. m. 37. mane. Emerſ. ex part. luc. hor. 3. min. 27. ſub horiz.

Ma-

Majus.

Die 6. Immerf. π ♌ ex part. obfc. hor. 9. min. 14. vefp. Emerf. ex part. luc. hor. 10. m. 21. 16 gr. infra diam. horiz.

Die 17. Immerf. λ ♐ ex part. luc. hor. 2. min. 7. mane. Emerf. ex part. obfc. hor. 3. min. 34. 19 gr. infr. diam. horiz.

Junius.

Die 18. Imm. 9 ♒ ex part. luc. hor. 2. min. 36. mane. Emerf. ex part. obfc. hor. 3. min. 37. 65 gr. infr. diam. horiz.

Julius.

Die 17. Imm. 16 ♓ ex part. luc. hor. 2. min. 56. mane. Emerf. ex part. obfc. hor. 4. min. 13. 31 gr. infra diam. horiz.

Auguftus.

Die 6. Immerf. λ ♐ ex parte obfc. hor. 8. min. 51. vefp. Emerf. ex part. luc. hor. 10. min. 13. 40 gr. infra diam. horiz.

Die 17. Immerf. μ ♈ ex part. luc. hor. 0. min. 7. mane. Emerf. ex parte obfc. hor. 1. min. 1. 40 gr. fupra diam. horiz.

Die 20. Imm. 132 ♉ ex part. luc. hor. 1. min. 23. mane. Emerf. ex part. obfc. hor. 2. min. 13. 19 gr. fupra diam. horiz.

September.

Die 1. Imm. A Oph. ex part. obfc. hor. 7. min. 33. vefp. Emerf. ex part. luc. hor. 8. min. 27. 72 gr. infr. diam. horiz.

Die 7. Immerf. 9 ♒ ex part. obfc. hor. 9. min. 26. vefp. Emerf. ex part. luc. hor. 10. min. 30. 62 gr. infr. diam. horiz.

Octo-

October.

Die 2. Immerf. σ ♑ ex part. obfc. hor. 5. min. 49. vefp. Emerf. ex parte lucid. h. 6. m. 43.; 60 gr. infr. diam. horiz.

Eadem die. Immerf π ♑ hor. 11. min. 27. vefp. Emerf. hor. 11. min. 55.; 53 gr. infr. diam. horiz. prope horiz. occ.

Die 7. Immerf. 16 ♓ ex part. luc. hor. 0. min. 13. mane. Emerf. ex part. obfc. hor. 1. min. 25.; 60 gr. infr. diam. horiz.

Die 14. Immerf. 11. ♊ ex part. luc. hor. 0. min. 54. mane. Emerf. ex parte obfc. hor. 1. min. 44.; 7 gr. infra diam. horiz.

November.

Die 6. hor. 10. min. 40. vefp. μ ♈ ftringet limbum lunæ.

Die 12. Immerf. ζ ♋ ex part. luc. hor. 5. min. 14. mane. Emerf. ex part. obfc. hor. 6. min. 27.; 22 gr. fupra diam. horiz.

Die 30. Immerf. 16 ♓ ex part. obfc. hor. 6. m. 29. vefp. Emerf. ex part. luc. hor. 7. min. 26.; 82 gr. infr. diam. horiz.

December.

Die 13. Immerf. e ♌ ex part. luc. hor. 6. min. 22. mane. Emerf. ex part. obfc. hor. 7 min. 30.; 24 gr. infr. diam. horiz.

Die 26. Immerf. x ♒ ex part. obfc. hor. 7. min. 41. vefp. Emerf. ex part. luc. hor. 8. min. 47.; 72 gr. infra diam. horiz.

De

De Eclipſibus.

Hoc anno ſeptem occurrent eclipſes: quinque ſolares, et duæ lunares: e quibus unica eclipſis lunaris die 11 Julii noſtro in horizonte conſpicua erit.

Prima eſt eclipſis ſolis die 1. Jan., nonniſi prope polum antarcticum viſibilis.

Altera eſt eclipſis lunæ totalis die 15. Jan. mane, quæ luna occidente hic loci initium ſumit, atque adeo inconſpicua.

Tertia eſt exigua ſolis eclipſis die 30. Jan. veſp. in America ſeptentrionali inhabitata ſpectabilis.

Quarta eſt inviſibilis ſolis eclipſis noctu intra 26 et 27 Junii.

Quinta eſt eclipſis lunæ totalis die 11 Julii, apud nos viſibilis, cujus elementa infra exhibentur.

Sexta eſt exigua ſolis eclipſis hic inconſpicua die 26 Julii mane.

Septima demum eſt ſolis eclipſis noctu inter 20 et 21 Dec. tantum in plagis auſtralibus telluris noſtræ viſibilis.

Elementa eclipſeos totalis lunæ
die 11. Julii veſp. Viennæ conſpicuæ.

Temp. Plenilun. verum	—	$10^h\ 7'\ 43''$ t. ver.
Long. lun. in ☍	— —	$9^s\ 18^\circ\ 59\ 58\ 6$
Lat. lun. in ☍	— —	0 14 0 0 B.
Mot. hor. lun. in Eclipt.	—	29 42 0
— — ſolis	— —	2 23 0
— — lunæ a ſole in Eclipt.		27 19 0
— — lunæ relativ. in orbit.		27 27 3
Mot. hor. lun. in lat.	—	+ 2 45 0
Semidiameter ſolis	— —	15 47 1
— — lunæ	— —	14 46 7

Pa-

Parall. hor. lun. — —		54	9	0
— — folis — —			8	6
Semidiameter Umbræ telluris		39	9	0
Inclinatio orbit. relat. ad Eclipt.	5°	44	8	0
Diftantia minima Centrorum —		13	55	8
Differ. inter opp. et med. —	—	1	24	0
Eadem in tempore — —	—	3	3	5
Semiduratio ab init. ad finem	1^h	54	25	0
— — ab Imm. tot. ad Emerf.	0	43	55	1

Ex his habentur fequentia momenta.

Initium Eclipf. —	8^h	10′	14″	t. ver.
Imm. tot. —	9	20	44	—
Medium Eclipf. —	10	4	39	—
Emerf. —	10	48	34	—
Finis —	11	59	4	—

Quantitas obfcurationis maximæ 16 dig. 14 min. in parte lunæ auftrali.

JANUARIUS. ☉

Dies Astronom.	Dies Mensis Civilis.	Dies Hebdomad.	JANUARIUS.	Tempus medium Meridiei veri. ☉ H. M. S. D.	Incrementum diurnum Temporis medii. S. D.	Distantia o ♈ a Meridiano. H. M. S. D.	Accelerat. diurna stellarum fixarum præ motu ☉ vero. M. S. D.
1	1	*Mart.*	*Circ. D.N.J.C.*	0. 3.54. 1	28. 4	5.13 30.0	4. 25. 1
2	2	Merc.	S. Macarius.	0. 4.22. 5	28. 2	5. 9. 4.9	4. 24. 8
3	3	Jov.	S. Genoveva.	0. 4.50. 7	28. 1	5. 4 40.1	4. 24. 4
4	4	Ven.	S. Titus	0. 5.18. 8	27. 7	5. 0 15.7	4. 24. 0
5	5	Sabb	S. Telesphor.	0. 5.46. 5	26. 9	4.55.51.7	4. 23 5
6	6	*F. Dom*	*Epiphan. Dom.*	0. 6.13. 4	26. 2	4.51.28.2	4. 23 0
7	7	Lun.	S. Raymund.	0. 6.39. 6	25. 8	4.47 5.2	4. 22. 5
8	8	Mart.	S. Severinus	0. 7. 5. 4	25. 4	4.42.42.7	4. 22. 0
9	9	Merc.	S. Marcellinus	0. 7.30. 8	24. 8	4.38 20.7	4. 21. 3
10	10	Jov.	S. Agatho P.	0. 7.55. 6	24. 0	4.33.59.4	4. 20. 5
11	11	Ven.	S. Hyginus	0. 8.19. 6	23. 2	4.29 38 9	4. 19. 9
12	12	Sabb.	S. Ernestus	0. 8.42. 8	22. 6	4.25.19 0	4. 19. 2
13	13	*F. Dom*	1 S. Hilarius.	0. 9. 5. 4	22. 0	4.20.59 8	4 18. 7
14	14	Lun.	S. Felix	0. 9.27. 4	21. 4	4.16.41.1	4. 18. 0
15	15	Mart.	S. Maurus	0. 9.48. 8	20. 9	4.12.23 1	4 17. 4
16	16	Merc.	S. Marcell. P.	0.10. 9. 7	20. 2	4. 8. 5 7	4. 16 8
17	17	Jov.	S. Ant. Abb.	0.10.29. 9	19. 5	4. 3.48 9	4 16. 2
18	18	Ven.	S. Prisca.	0.10.49. 4	18. 7	3.59 32 7	4. 15. 4
19	19	Sabb.	S. Canutus.	0 11. 8. 1	18. 0	3.55.17.3	4. 14. 5
20	20	*F. Dom*	2. *F. SS. N. J.*	0 11.26. 1	17. 2	3.51. 2.8	4. 13. 7
21	21	Lun.	S. Agnes V.M.	0.11.43. 3	16. 4	3.46 49 1	4. 13 0
22	22	Mart.	SS. Vinc. &A.	0.11.59. 7	15. 7	3.42.36.1	4. 12. 4
23	23	Merc.	Desp. B.M.V.	0.12.15. 4	14. 8	3 38.23.7	4 11. 5
24	24	Jov.	S. Timoth.	0.12.30. 2	14. 0	3 34 12 2	4. 10. 5
25	25	Ven.	S. Conv. S. P.	0.12.44. 2	13. 2	3.30. 1 7	4. 9. 9
26	26	Sabb.	S. Polycarpus	0.12.57. 4	12. 5	3.25.51 8	4 9. 1
27	27	*F. Dom*	3. S. Joan. Chr.	0.13. 9. 9	11. 9	3 21 42 7	4. 8. 4
28	28	Lun.	S. Car. Mag.	0.13.21. 8	11. 1	3 17 34 3	4. 7. 5
29	29	Mart.	S. Franc. Sal.	0 13 32. 9	10. 2	3 13.26.8	4. 6 7
30	30	Merc.	S. Martina.	0 13 43. 1	9. 3	3. 9 20.1	4. 5. 9
31	31	Jov.	S. Petr. Nol.	0.13 52. 4		3. 5 14.2	

JANUARIUS. ☉

Solis in meridiano versantis.

Dies Mensis.	Longitudo vera. ♑ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa H. M. S. D.	Declinatio vera Australis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	10. 41. 12	2. 32. 9	281.37.29	18.46.30. 0	23. 2. 9	18. 45 15
2	11. 42. 27	2. 32. 9	282.43.46	18.50.55. 1	22.56 59	18. 50 25
3	12. 43. 42	2. 32. 9	283.49 58	18.55.19. 9	22.51.22	18 56 2
4	13. 44. 56	2. 32. 9	284.56. 4	18.59.44. 3	22 45 19	19. 2 5
5	14. 46. 9	2. 32. 9	286. 2. 3	19. 4. 8. 3	22.38.48	19. 8 36
6	15. 47. 23	2. 32. 9	287. 7 56	19. 8.31. 8	22.31.50	19. 15 34
7	16. 48. 36	2. 32. 8	288.13.41	19.12.54. 8	22.24.26	19. 22 58
8	17. 49. 48	2. 32. 8	289 19.19	19 17 17. 3	22.16.36	19. 30 48
9	18. 50. 59	2. 32. 8	290 24.48	19.21.39. 3	22. 8.19	19. 39 5
10	19. 52. 8	2. 32. 8	291.30. 8	19 26 0. 0	21 59 37	19. 47 47
11	20. 53. 16	2. 32. 8	292.35.17	19 30.21. 1	21.50.28	19. 56 56
12	21. 54. 22	2. 32. 8	293 40.15	19.34.41. 0	21.40.55	20. 6 29
13	22. 55. 26	2. 32. 8	294.45. 3	19.39. 0. 2	21 30.56	20. 16 28
14	23. 56. 31	2. 32. 7	295.49.43	19.43.18. 9	21 20 33	20. 26 51
15	24. 57. 37	2. 32. 7	296.54.13	19.47 36. 9	21. 9 44	20. 37 40
16	25. 58. 44	2. 32. 7	297.58.35	19 51.54. 3	20 58.31	20. 48 53
17	26. 59. 50	2. 32. 6	299. 2.47	19.56.11. 1	20 46 54	21. 0 30
18	28. 0. 55	2. 32. 6	300. 6.50	20. 0.27. 3	20.34.53	21. 12 31
19	29. 1. 58	2. 32. 6	301.10.39	20 4.42. 7	20.22.31	21. 24 53
20	0. ♒ 3. 0	2. 32. 5	302.14 16	20. 8.57. 2	20. 9.44	21. 37 40
21	1. 4. 2	2. 32. 5	303.17.43	20 13.10. 9	19.56.35	21. 50 49
22	2. 5. 4	2. 32. 4	304.20.59	20.17.23. 9	19.43. 4	22. 4 20
23	3. 6. 5	2. 32. 4	305.24. 4	20.21.36. 3	19.29.10	22. 18 14
24	4. 7. 4	2. 32. 4	306.26.54	20.25.47. 8	19.14.55	22. 32 29
25	5. 8. 2	2. 32. 3	307.29.34	20.29.58. 3	19. 0.20	22. 47 4
26	6. 9. 0	2. 32. 3	308.32. 2	20.34. 8. 2	18.45.23	23. 2 1
27	7. 9. 58	2. 32. 3	309.34.19	20.38.17. 3	18.30. 4	23. 17 20
28	8. 10. 55	2. 32. 2	310.36.24	20.42.25. 7	18.14.26	23. 32 58
29	9. 11. 52	2. 32. 2	311.38.17	20.46.33. 2	17.58.30	23. 48 54
30	10. 12. 48	2. 32. 2	312.39.58	20.50.39. 9	17.42.12	24. 5 12
31	11. 13. 43	2. 32. 1	313.41.26	20.54.45. 8	17.25.36	24. 21 48

JANUARIUS. ⊙

Dies Mensis.	Solis in Meridiano versantis: Diameter ⊙ apparens. M.	S.	D.	Mora transitus disci ⊙ per meridianum M.	S.	D.	Distantia ⊙ a ♁ cujus distant. med. 10000.	Ortus Centri ⊙ verus. H.	M.	Occasus centri ⊙ verus. H.	M.
1	32	38	7	2	21	8	9832	19	54	4	6
2	32	38	7	2	21	7	9832	19	53	4	7
3	32	38	6	2	21	6	9832	19	52	4	8
4	32	38	5	2	21	5	9332	19	52	4	8
5	32	38	4	2	21	4	9833	19	51	4	9
6	32	38	3	2	21	3	9833	19	51	4	9
7	32	38	2	2	21	1	9833	19	50	4	10
8	32	38	1	3	21	0	9834	19	49	4	11
9	32	38	0	2	20	8	9835	19	48	4	12
10	32	37	9	2	20	7	9835	19	47	4	13
11	32	37	8	2	20	5	9836	19	46	4	14
12	32	37	7	2	20	3	9836	19	45	4	15
13	32	37	6	2	20	2	9837	19	44	4	16
14	32	37	4	2	20	0	9837	19	43	4	17
15	32	37	2	2	19	8	9838	19	42	4	18
16	32	37	1	2	19	6	9839	19	41	4	19
17	32	36	9	2	19	4	9839	19	40	4	20
18	32	36	7	2	19	2	9840	19	39	4	21
19	32	36	6	2	19	1	9841	19	38	4	22
20	32	36	4	2	18	9	9842	19	37	4	23
21	32	36	2	2	18	7	9843	19	36	4	24
22	32	36	0	2	13	5	9844	19	34	4	26
23	32	35	7	2	18	2	9845	19	32	4	28
24	32	35	5	2	18	0	9846	19	31	4	29
25	32	35	2	2	17	7	9847	19	30	4	30
26	32	35	0	2	17	5	9848	19	29	4	31
27	32	34	7	2	17	3	9850	19	27	4	33
28	32	34	4	2	17	0	9851	19	26	4	34
29	32	34	1	2	16	8	9852	19	25	4	35
30	32	33	8	2	16	6	9853	19	23	4	37
31	32	33	5	2	16	4	9854	19	22	4	38

Dies Mensis.	Phænomena & Observationes ⊙
4	⊙ in parall. γ Leporis c. h. 10. m. 30.
7	⊙ in parall. β Corvi c. h. 17. m. 3.
8	⊙ in parall. γ Hydr. c. h. 17. m. 48.
11	⊙ in nodo descend. ♄
12	⊙ in parall. ε Corvi culm. h. 19. m. 19.
15	⊙ in parall. β Lepor. culm. h. 9. m. 26.
19	Ingressus ⊙ in ♒ h. 22. m. 49.
23	⊙ in parall. β Ceti culm. h. 4. m. 7.
28	⊙ in parall. α Lepor. culm. h. 8. m. 36.
	⊙ in parall. β Can. maj. c. h. 9. m. 25.

JANUARIUS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Declinatio vera ☽ G. M. S.	Nodus ☽ ascendens G. M.	Diameter ☽ horizontalis. M. S.	Parallaxis ☽ horizontalis. M. S.	Tempus culm. ☽ H. M
1	♑ 15 18 21	A 0 56 37	A 23 31 22	26 ♑ 30	29 47	54 32	0 21
2	27 25 11	B 0 10 15	20 31 46	26 27	29 58	54 53	1 9
3	♒ 9 42 48	1 17 39	16 35 25	26 24	30 11	55 17	1 55
4	22 10 18	2 22 6	11 53 34	26 21	30 27	55 44	2 40
5	♓ 4 50 29	3 21 7	6 37 26	26 18	30 43	56 15	3 23
6	17 45 58	4 10 57	1 2 32	26 15	31 3	56 51	4 7
7	♈ 0 58 17	4 48 43	B 4 48 0	26 11	31 24	57 31	4 52
8	14 29 29	5 11 36	10 30 2	26 8	31 46	58 11	5 39
9	28 20 39	5 17 13	15 49 41	26 5	32 9	58 52	6 30
10	♉ 12 31 53	5 3 57	20 25 58	26 2	32 31	59 32	7 26
11	27 1 8	4 31 21	23 54 37	25 59	32 48	60 6	8 25
12	♊ 11 45 1	3 40 30	25 51 34	25 56	33 2	60 29	9 28
13	26 37 54	2 34 16	25 59 34	25 52	33 7	60 41	10 3
14	♋ 11 32 19	1 17 27	24 14 56	25 49	33 5	60 37	11 35
15	26 20 26	A 0 4 8	20 50 16	25 46	32 53	60 14	12 34
16	♌ 10 54 34	1 24 6	16 9 54	25 43	32 35	59 41	13 29
17	25 8 38	2 36 59	10 41 21	25 40	32 10	58 55	14 18
18	♍ 8 58 43	3 38 20	4 50 17	25 37	31 41	58 2	15 4
19	22 23 15	4 25 51	A 1 2 47	25 33	31 13	57 9	15 48
20	♎ 5 22 58	4 58 13	6 42 3	25 30	30 46	56 19	16 32
21	18 0 19	5 14 54	11 54 6	25 27	30 21	55 33	17 16
22	♏ 0 19 5	5 16 43	16 31 48	25 24	30 0	54 57	18 1
23	12 23 21	5 4 9	20 23 31	25 21	29 46	54 29	18 47
24	24 18 12	4 38 44	23 21 44	25 18	29 36	54 12	19 35
25	♐ 6 5 5	4 1 39	25 18 39	25 14	29 32	54 6	20 25
26	17 57 33	3 15 19	26 9 39	25 11	29 35	54 9	21 16
27	29 50 34	2 18 22	25 46 10	25 8	29 40	54 20	22 6
28	♑ 11 50 35	1 15 54	24 11 48	25 5	29 50	54 38	22 55
29	24 0 22	0 9 12	21 28 43	25 1	30 2	55 1	23 43
30	♒ 6 21 40	B 0 58 57	17 45 2	24 58	30 22	55 37	♂
31	18 55 54	2 5 16	13 10 43	24 55	30 32	55 56	0 29

JANUARIUS. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		A		
1	♑ 21.21. 6	0 23 24	29.52	54.42
		B		
2	♒ 3.33.10	0 44 1	30. 5	55. 5
3	15.55. 2	1 50 29	30.19	55.30
4	28.28 46	2 52 36	30.34	55.58
5	♓ 11.16.15	3 47 21	30.53	56.33
6	24.19.54	4 31 33	31.13	57.10
7	♈ 7.41 28	5 2 11	31.35	57.51
8	21.22 31	5 16 43	31.57	58.31
9	♉ 5.23.53	5 13 1	32.20	59.13
10	19.44.24	4 50 4	32.41	59.51
11	♊ 4.21.29	4 8 1	32.56	60.20
12	19.10.46	3 8 59	33. 6	60.38
13	♋ 4. 5.21	1 56 50	33. 9	60 43
14	18.57.42	0 36 52	33. 2	60.30
		A		
15	♌ 3.39.40	0 44 41	32.46	60. 2
16	18. 4.23	2 1 44	32.24	59.20
17	♍ 2. 6.54	3 9 20	31.57	58.30
18	15.44.15	4 3 50	31.26	57.34
19	28.56. 4	4 44 5	30.54	56.43
20	♎ 11.44 10	5 8 33	30.32	55.54
21	24.11.52	5 17 34	30. 9	55.13
22	♏ 6.22.42	5 12 5	29.51	54.40
23	18 21.42	4 53 0	29 39	54.18
24	♐ 0.13.30	4 21 34	29 33	54. 7
25	12. 2.35	3 39 8	29.32	54. 6
26	23.53.25	2 47 17	29 37	54.14
27	♑ 5.49.32	1 47 50	29.45	54.28
28	17.54. 8	0 42 52	29.57	54.49
		B		
29	♒ 0. 9.30	0 24 53	30.10	55.14
30	12.37. 9	1 32 31	30.24	55.41
31	25.18.10	2 36 44	30.41	56.11

Congress. ☽ cum fixis & Planet.

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H. M.	Distantia centri vera in latitudine. G. M.
10	ε ♈ 4	5 23	0 49 B
11	χ ♉ 5	13 40	0 5 B
14	δ ♊ 3	6 51	1 6 B

JANUARIUS.

Dies Mensis.	Aetas. ☽	Phænomena & Observationes. ☽
1	2	☽ ad ψ ω ♐
2	3	☽ in nod. asc. et ad β π σ ♑
3	4	☽ ad η ϑ ε γ ♑
4	5	☽ ad λ δ μ ♑ ϑ ς ♒
5	6	☽ ad κ λ φ ♒
6	7	☽ in Aequat. et ad κ λ ♓
7	8	☽ ad δ ε ♓
8	9	☽ ad μ η π ν ♓
9	10	☽ ad ϑ μ ο ♈
10	11	☽ ad δ ε ζ τ ♈
11	12	☽ ad Plejad. η φ γ δ ε ϑ α ♉
12	13	☽ Perigæa et ad β ο ζ ♉
13	14	Lunist. bor. et ad η μ ν γ ♊
14	15	☽ ad ζ δ κ ♊
15	16	☽ in nodo desc. et ad ζ λ ϑ η γ ♋
16	17	☽ ad ο κ α ♋
17	18	☽ ad η α π ♌
18	19	☽ ad χ σ τ e ♌
19	20	☽ in Aequat. et ad β η ♍
20	21	☽ ad χ γ ϑ ♍
21	22	☽ ad Spic. ♍
22	23	☽ ad κ λ ♍
23	24	☽ ad α ν ζ γ ♎
24	25	☽ ad κ η ϑ λ ♎ δ β ♏
25	26	☽ Apogæa et ad α τ ♏
26	27	☽ ad ϑ B Oph.
27	28	Lunist. austr. et ad δ γ λ σ ♐
28	29	☽ ad ο τ π ♐
29	30	☽ in nodo asc. et ad σ π τ ♑
30	1	☽ ad η ϑ ζ ε ♑
31	2	☽ ad γ κ λ ϑ ♑

Dies Mensis.	Phænomena & Observationes Planetarum.
1	♀ ad 11 Oph. mane dist. centr. ♀ 10 m. bor.
	♅ ad λ ♎ mane dist. centr. ♅ 47 m. bor.
9	☿ in nodo suo ascend.
11	♀ ad ς Oph. h. 11. m. 12. dist. centr. ♀ 45 m. austr.
14	☿ in perihelio.
16	♀ in dist. media a sole
17	♅ ad β ♏ h. 5. dist. centr. ♅ 9 m. austr.
19	♅ ad 1 ω ♏ h. 13. dist. centr. ♅ 38 m. bor.
20	♅ ad 2 ω ♏ h. 3. dist. centr. ♅ 48 m. bor.
	Conjunctio ☿ & ☉ inf.
26	♅ ad ν ♏ h. 6. dist. centr. ♅ 13 m. bor.
28	Oppositio ♂ cum sole.
29	♀ ad 1 ν ♐ med. noct. dist. centr. ♀ 24 m. bor.

	Phases Lunæ
8	Primus Quadrans h. 6. m. 17. in ♈ gr. 18. m. 6.
14	Plenilunium h. 21. m. 35. in ♋ gr. 24 m. 52.
22	Ultimus Quadrans h. 3. m. 49. in ♏ gr. 2. m. 15.
30	Novilunium h. 8. m. 2. in ♒ gr. 10. m. 33.

Planetæ in parallelis fixarum.

♅ mense toto in parall. ο Erid.
♄ mense toto ε Oph.
♅ mense toto β Ceti. β ♏
♂ 1. 7. η Boot. 13 ν ♊ Arctur. 19. ζ ι ♉. 25. β Herc. γ ♋.
♀ 1. λ ♎. 7. 2 μ ♐. 13. ε Corvi. 19 β Corv. γ Lepor. 25. 2 ν ♐.
☿ 1. δ ♏. 7. λ ♎ 13. α Crater.

JANUARIUS.

Dies Mensis.	Ortus Planetarum apparens.		Tempus verum culminationis Planetarum.		Longitudo Planetarum Sole culminante.		Latitudo Planetarum Sole culminante.		Declinatio Planetarum Sole culminante.		Occasus Planetarum apparens.	
	H.	M.	H.	M.	G.	M.	G.	M.	G.	M.	H.	M.
					♅ *Uranie.*							
1	13	3	18	32	20	♎ 42	0 B	38	7 A	30	0	1
7	12	37	18	6	20	46	0	38	7	32	23	35
13	12	11	17	40	20	50	0	38	7	34	23	9
19	11	45	17	14	20	55	0	38	7	36	22	43
25	11	20	16	49	20	59	0	38	7	38	22	18
					♄ *Saturnus.*							
1	12	29	18	15	15	♎ 41	2 B	26	3 A	56	0	1
7	12	4	17	50	15	52	2	28	3	58	23	36
13	11	40	17	25	16	1	2	30	4	0	23	10
19	11	15	17	0	16	9	2	31	4	1	22	45
25	10	49	16	34	16	15	2	33	4	3	22	19
					♃ *Jupiter.*							
1	16	22	20	55	27	♏ 35	0 B	52	18 A	48	1	28
7	16	1	20	33	28	41	0	52	19	2	1	5
13	15	40	20	11	29	45	0	53	19	15	0	41
19	15	20	19	50	0	♐ 47	0	53	19	27	0	20
25	14	59	19	28	1	47	0	53	19	39	23	57
					♂ *Mars.*							
1	7	5	14	39	18	♌ 7	3 B	47	19 B	3	22	13
7	6	30	14	8	16	53	4	1	19	39	21	46
13	5	54	13	36	15	10	4	13	20	20	21	18
19	5	16	13	3	13	6	4	22	21	5	20	50
25	4	37	12	29	10	49	4	29	21	52	20	21
					♀ *Venus.*							
1	16	58	21	28	5	♐ 16	1 B	45	19 A	28	1	58
7	17	8	21	33	12	39	1	32	20	49	1	58
13	17	18	21	38	20	2	1	17	21	48	1	58
19	17	29	21	44	27	26	1	1	22	25	1	59
25	17	40	21	51	4	♑ 50	0	44	22	39	2	2
					☿ *Mercurius.*							
1	21	5	1	20	29	♑ 14	1 A	31	21 A	48	5	35
7	20	59	1	20	5	♒ 43	0	24	19	15	5	41
13	20	32	0	59	7	35	1 B	17	17	9	5	26
19	19	39	0	13	2	55	2	59	16	38	4	47
25	18	36	23	17	25	♑ 38	3	34	17	31	3	58

JANUARIUS.

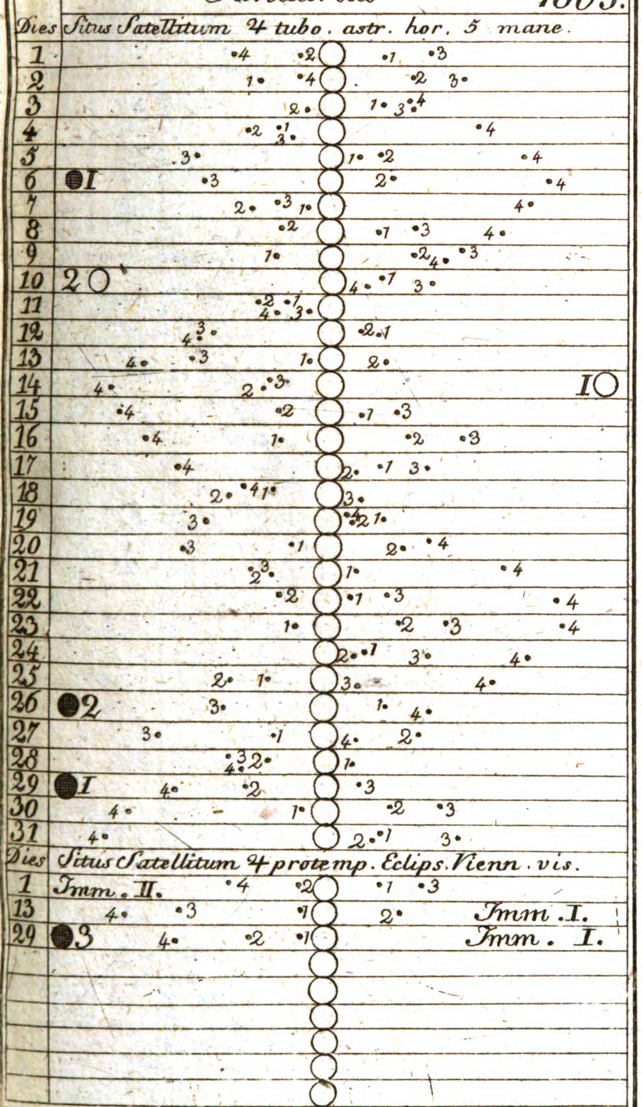
Eclipses Satellitum Jovis.

D. Mens.	I. Satelles. Immersiones. H. M. S.	D. Mens.	I. Satelles. Immersiones. H. M. S.	D. Mens.	II. Satelles. Immersiones. H. M. S.	D. Mens.	III. Satelles. H. M. S.
3	3 19 45. V	23	8 52.12 V	1	6* 5 48 M	7	9 2 17 M I
4	9 47 44 M	25	3 20. 8 V	4	7 22 24 V	7	11 1 59 M E
6	4 15 16 M	27	9 48. 5 M	8	8 37 58 M	14	0 57 38 V I
7	10 42 48 V	29	4*16. 4 M	11	9 53 49 V	14	2 55 44 V E
9	5 10 23 V	30	10 44. 4 V	15	11 9 45 M	21	4 52 50 V I
11	11 37 36 M			19	0 25 52 M	21	6 53 24 V E
13	6* 5 39 M			22	1 41 52 V	28	8 48 49 V I
15	0 33 21 M			26	2 58 11 M I	28	10 49 57 V E
16	7 1 2 V			26	5*23 37 M E		
18	1 28 48 V			29	4 14 25 V I		
20	7 56 33 M			29	6 29 53 V E		
22	2 24 23 M						

D. Mens.	IV. Sat. ☌
1	11 34 14 V
18	5 23 13 V



Januarius 1805.



FEB

FEBR

	Ven.	S. Ign
	Sabb	Purif.
	F. Dom	4 S. B
4	Lun.	S. A
	Mart.	S. Ag
	Merc.	S. Do
	Jov.	S. Ro
	Ven.	S. Jo
	Sabb.	S. Ap
	F. Dom	Septua
	Lun.	S. Lu
	Mart.	S. Eu
	Merc.	S. Ca
	Jov.	S. Va
	Ven.	SS. Fa
16	Sabb.	S. Ju
17	F. Dom	Sexag
	Lun.	S. Si
19	Mart.	S. Ga
	Merc.	S. El
	Jov.	S. Fe
	Ven.	Cath.
	Sabb.	S. Ro
	F. Dom	Quin
	Lun.	S. W
	Mart.	S. A
	Merc.	Dies
	Jov.	S. R

FEBRUARIUS. ☉

Dies Astronom.	Dies Mensis Civilis.	Dies Hebdomadæ.	FEBRUARIUS.	Tempus medium Meridiei veri ☉. H. M. S. D.	Increment. diurn. temp. medii. S. D.	Distantia ♈ à Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D.
32	1	Ven.	S. Ignat. M.	0. 14. 0. 5	7 6	3. 1. 9. 0	4 4 2
33	2	*Sabb*	*Purif. B. V. M.*	0. 14. 8. 1	7 0	2. 57. 4. 8	4 3 4
34	3	*F. Dom*	4. S. Blasius.	0. 14. 15. 1	6 2	2. 53. 1. 4	4 2 5
35	4	Lun.	S. Andr. Cors.	0. 14. 21. 3	5 2	2. 48. 58. 9	4 1 6
36	5	Mart.	S. Agatha.	0. 14. 26. 5	4 3	2. 44. 57. 3	4 0 9
37	6	Merc.	S. Dorothea.	0. 14. 30. 8	3 2	2. 40. 56. 4	3 59 9
38	7	Jov.	S. Romualdus.	0. 14. 34. 0	2 6	2. 36. 56. 5	3 59 2
39	8	Ven.	S. Joan. de M.	0. 14. 36. 6	1 9	2. 33. 57. 3	3 58 4
40	9	Sabb.	S. Apollonia	0. 14. 38. 5	1 1	2. 28. 58. 9	3 57 6
41	10	*F. Dom*	*Septuag.* S. Sch.	0. 14. 39. 6	0 2	2. 25. 1. 3	3 56 8
42	11	Lun.	S Lucius	0. 14. 39. 8	0 7	2. 21. 4. 5	3 56 0
43	12	Mart.	S. Eulalia	0. 14. 39. 1	1 3	2. 17. 8. 5	3 55 2
44	13	Merc.	S. Cath. Ricc.	0. 14. 37. 8	2 1	2. 13. 13. 3	3 54 4
45	14	Jov.	S. Valentinus.	0. 14. 35. 7	2 8	2. 9. 18. 9	3 53 8
46	15	Ven.	SS. Faust. Jov.	0. 14. 32. 9	3 6	2. 5. 25. 1	3 52 9
47	16	Sabb.	S. Juliana	0. 14. 29. 3	4 5	2. 1. 32. 2	3 52 1
48	17	*F. Dom*	*Sexag.* S. Julianus	0. 14. 24. 8	5 2	1. 57. 40. 1	3 51 3
49	18	Lun.	S. Simeon. Ep.	0. 14. 19. 6	5 8	1. 53. 48. 8	3 50 8
50	19	Mart.	S. Gabinus.	0. 14. 13. 8	6 3	1. 49. 58. 0	3 50 3
51	20	Merc.	S. Eleuther.	0. 14. 7. 5	6 8	1. 46. 7. 7	3 49 6
52	21	Jov.	S. Felix P.	0. 14. 0. 7	7 5	1. 42. 18. 1	3 49 0
53	22	Ven.	Cath. S. Petr.	0. 13. 53. 2	8 1	1. 38. 29. 1	3 48 5
54	23	Sabb.	S. Romana V.	0. 13. 45. 1	8 8	1. 34. 40. 0	3 47 8
55	24	*F. Dom*	*Quinq.* S. Mathias	0. 13. 36. 3	9 3	1. 30. 52. 8	3 47 2
56	25	Lun.	S. Walburga	0. 13. 27. 0	9 9	1. 27. 5. 6	3 46 6
57	26	Mart.	S. Alexander	0. 13. 17. 1	10 5	1. 23. 19. 0	3 46 0
58	27	Merc.	Dies Cinerum	0. 13. 6. 6	11 1	1. 19. 33. 0	3 45 4
59	28	Jov.	S. Romanus	0. 12. 55. 5		1. 15. 47. 6	

FEBRUARIUS. ⊙

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♒	Motus horarius verus.	Ascensio recta.	Ascensio recta conversa.	Declinatio vera Australis	Altitudo Centri ⊙ vera.
	G. M. S.	M. S.	G. M. S.	H. M. S. D.	G. M. S.	G. M. S.
1	12. 14. 37	2. 32. 2	314 42 45	20.58.51. 0	17 8 42	24 38.42
2	13. 15. 29	2. 32. 1	315 43 48	21. 2.55. 2	16 51 29	24.55 55
3	14. 16. 20	2. 32. 1	316 44 39	21. 6.58. 6	16 33 59	25.13.25
4	15 17. 9	2. 32. 0	317 45 18	21.11. 1. 1	16 16 12	25.31.12
5	16. 17. 55	2. 31. 9	318 45 41	21.15. 2. 7	15 58 9	25.49.15
6	17. 18. 41	2. 31. 8	319 45 54	21.19. 3. 6	15 39 49	26. 7.35
7	18. 19. 25	2. 31. 8	320 45 53	21.23. 3. 5	15 21 13	26.26.11
8	19. 20. 8	2. 31. 7	321 45 41	21.26. 2. 7	15 2 21	26.45. 3
9	20. 20. 49	2. 31. 7	322 45 17	21.31. 1. 1	14 43 14	27. 4 19
10	21. 21. 28	2. 31. 6	323 44 40	21.34.58. 7	14 23 52	27.23.32
11	22. 22. 6	2. 31. 5	324 43 54	21.38.55. 5	14 4 17	27.43. 7
12	23. 22. 42	2. 31. 4	325 42 53	21.42.51. 5	13 44 27	28. 2.57
13	24. 23. 16	2. 31. 4	326 41 41	21.46.46. 7	13 24 26	28.22.58
14	25. 23. 48	2. 31. 3	327 40 17	21.50.41. 1	13 4 11	28.43.13
15	26. 24. 19	2. 31. 3	328 38 44	21.54.34. 9	12 43 43	29. 3.41
16	27. 24. 48	2. 31. 2	329 36 58	21.58.27. 8	12 23 2	29.24.22
17	28. 25. 14	2. 31. 1	330 34 59	22 2.19. 9	12 2 10	29.45.14
18	29 25. 39	2. 31. 0	331 32 49	22. 6.11. 2	11 41 7	30. 6.17
19	0. ♓ 26. 3	2. 31. 0	332 30 31	22.10. 2. 0	11 19 53	30.27.31
20	1. 26. 27	2. 30. 9	333 28 5	22.13.52. 3	10 58 27	30.48.57
21	2. 26. 50	2. 30. 8	334 25 29	22.17.41. 9	10 36 50	31.10.34
22	3. 27. 12	2. 30. 7	335 22 45	22.21.30. 9	10 15 4	31.32.20
23	4. 27. 33	2. 30. 7	336 19 51	22.25.19. 4	9 53 9	31.54.15
24	5. 27. 53	2. 30. 6	337 16 47	22 29. 7. 2	9 31 5	32.16.19
25	6. 28. 11	2. 30. 5	338 13 35	22.32.54. 4	9 8 51	32.38.33
26	7. 28 26	2. 30. 4	339 10 15	22.36.41. 0	8 46 29	33. 0.55
27	8. 28. 39	2. 30. 3	340 6 45	22.40.27. 0	8 24 1	33.23.23
28	9. 28. 50	2. 30. 2	341 3 6	22.44.12. 4	8 1 25	33.45.59

FEBRUARIUS. ⊙

Dies Mensis.	Solis in Meridiano versantis. Diameter ⊙ apparens. M. S. D.	Mora transitus disci ⊙ per Meridianum. M. S. D.	Distantia ⊙ à ♁. cujus Distantia media. 10000.	Ortus centri ⊙ verus. H. M.	Occasus centri ⊙ verus. H. M.
1	32 33 1	2 16 1	9855	19 20	4 40
2	32 32 7	2 15 9	9857	19 18	4 42
3	32 32 4	2 15 7	9859	19 16	4 44
4	32 32 1	2 15 5	9861	19 15	4 45
5	32 31 8	2 15 3	9864	19 13	4 47
6	32 31 5	2 15 0	9866	19 12	4 48
7	32 31 1	2 14 8	9868	19 11	4 49
8	32 30 8	2 14 6	9870	19 9	4 51
9	32 30 4	2 14 4	9872	19 8	4 52
10	32 30 0	2 14 2	9874	19 6	4 54
11	32 29 6	2 14 0	9876	19 5	4 55
12	32 29 2	2 13 8	9878	19 3	4 57
13	32 28 8	2 13 5	9880	19 1	4 59
14	32 28 4	2 13 3	9882	19 0	5 0
15	32 28 0	2 13 1	9884	18 58	5 2
16	32 27 6	2 12 9	9886	18 56	5 4
17	32 27 2	2 12 7	9888	18 54	5 6
18	32 26 8	2 12 5	9890	18 52	5 8
19	32 26 3	2 12 3	9892	18 51	5 9
20	32 25 9	2 12 1	9894	18 49	5 11
21	32 25 4	2 11 9	9896	18 47	5 13
22	32 25 0	2 11 7	9899	18 46	5 14
23	32 24 5	2 11 5	9901	18 44	5 16
24	32 24 1	2 11 3	9903	18 42	5 18
25	32 23 6	2 11 1	9906	18 41	5 19
26	32 23 2	2 10 9	9908	18 39	5 21
27	32 22 7	2 10 7	9910	18 37	5 23
28	32 22 3	2 10 5	9913	18 36	5 24

Dies Mensis.	Phænomena & Observationes. ⊙
2	⊙ in parall. Sirii culm. h. 9. m. 28.
	⊙ in parall. γ Corvi culm. h. 14. m. 56.
6	⊙ in parall. δ Corvi c. h. 14. m. 43.
	⊙ in parall α ♎ c. h. 17. m. 11.
10	⊙ in parall. γ Erid. c. h. 6. m. 8.
	⊙ in parall. γ ♎ culm. h. 17. m. 49.
14	⊙ in parall. ε Ceti. c. h. 4. min. 34.
15	⊙ in parall. λ ♍ c. h. 16. m. 7.
18	Ingressus ⊙ in 0° ♓ h. 13. m. 39.
20	⊙ in parall. δ Erid. c. h. 5. m. 15.
21	⊙ in parall. Spic. ♍ culm. h. 14. m. 51.
22	⊙ in parall. κ Orion. c. h. 7. m. 11.
25	⊙ in parall. β ♎ c. h. 16. m. 27.
26	⊙ in parall. Rigel c. h. 6. m. 24.
28	⊙ in parall. α Hydr. c. h. 10. m. 28.

FEBRUARIUS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis	Longitudo vera ☽				Latitudo vera ☽			Declinatio vera ☽			Nodus ☽ ascendens.		Diam. ☽ horizontalis.		Parallaxis ☽ horizontalis.		Tempus culm. ☽	
	S.	G.	M	S.	G.	M.	S.	G.	M.	S.	G.	M.	M.	S.	M.	S.	H.	M
						B			A									
1	♓	1	43	55	3	6	25	7	57	59	24 ♑	51	30	49	56	26	1	14
2		14	45	37	3	49	10	2	29	3	24	48	31	5	56	55	1	59
									B									
3		28	0	31	4	39	59	3	29	12	24	45	31	20	57	23	2	44
4	♈	11	28	51	5	6	2	9	24	3	24	42	31	35	57	51	3	31
5		25	9	52	5	15	17	14	37	56	24	39	31	51	58	19	4	20
6	♉	9	1	50	5	6	32	19	21	22	24	36	32	5	58	45	5	13
7		23	4	55	4	39	31	23	4	1	24	32	32	18	59	8	6	10
8	♊	7	17	26	3	55	11	25	24	52	24	29	32	28	59	27	7	10
9		21	37	13	2	55	49	26	6	21	24	26	32	35	59	40	8	13
10	♋	6	2	6	1	45	8	25	4	38	24	23	32	38	59	46	9	15
11		20	27	42	0	27	40	22	21	54	24	20	32	37	59	43	10	14
						A												
12	♌	4	49	23	0	51	4	18	15	9	24	17	32	30	59	29	11	9
13		19	3	13	2	5	44	13	8	2	24	13	32	14	59	2	12	1
14	♍	3	3	38	3	11	26	7	25	2	24	10	31	55	58	27	12	50
15		16	46	36	4	1	29	1	31	1	24	7	31	32	57	44	13	36
									A									
16	♎	0	9	15	4	41	23	4	44	58	24	4	31	7	56	59	14	21
17		13	10	24	5	5	18	9	53	19	24	1	30	43	56	15	15	6
18		25	50	40	5	11	55	14	50	33	23	58	30	21	55	34	15	51
19	♏	8	12	23	5	3	49	19	2	15	23	54	30	2	55	0	16	38
20		20	18	59	4	42	0	22	21	56	23	51	29	48	54	35	17	26
21	♐	2	15	1	4	8	38	24	41	31	23	48	29	40	54	20	18	16
22		14	5	16	3	24	38	25	54	7	23	45	29	37	54	15	19	6
23		25	54	53	2	31	53	25	55	49	23	42	29	40	54	19	19	57
24	♑	7	49	1	1	32	19	24	46	8	23	39	29	47	54	33	20	47
25		19	52	23	0	28	1	22	27	15	23	35	29	59	54	56	21	36
						B												
26	♒	2	8	57	0	38	39	19	4	26	23	32	30	16	55	26	22	23
27		14	41	46	1	44	35	14	46	30	23	29	30	35	56	1	23	9
28		27	32	36	2	46	47	9	43	41	23	26	30	55	56	37	23	55

FEBRUARIUS. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
		B		
1	♓ 8.12.58	3 34 6	30 57	56 41
2	21 21.28	4 21 14	31 12	57 8
3	♈ 4.43. 9	4 55 2	31 27	57 37
4	18.17.45	5 12 50	31 43	58 5
5	♉ 2. 4.30	5 13 17	31 58	58 32
6	16. 2.10	4 55 17	32 11	58 57
7	♊ 0.10.10	4 19 21	32 24	59 19
8	14.26 29	3 27 7	32 32	59 35
9	28.49. 3	2 21 37	32 38	59 45
10	♋ 13.15.28	1 6 57	32 39	59 47
		A		
11	27.38.57	0 11 49	32 34	59 38
12	♌ 11 57.43	1 29 13	32 22	59 17
13	26. 5 26	2 39 58	32 5	58 46
14	♍ 9.57 31	3 39 49	31 44	58 7
15	23 30 36	4 25 48	31 19	57 22
16	♎ 6.42.25	4 56 4	30 54	56 36
17	19 33. 5	5 10 33	30 32	55 54
18	♏ 2. 3.39	5 9 42	30 10	55 15
19	14 17 25	4 54 38	29 54	54 45
20	26.18. 3	4 26 55	29 43	54 25
21	♐ 8.10 32	3 47 45	29 37	54 15
22	19.59 48	2 59 12	29 37	54 15
23	♑ 1.51. 4	2 2 51	29 43	54 24
24	13.49.16	1 0 34	29 53	54 43
		B		
25	25.58.48	0 5 9	30 8	55 10
26	♒ 8 23.11	1 11 51	30 26	55 43
27	21. 4.51	2 16 19	30 46	56 19
28	♓ 4. 5. 9	3 15 22	31 5	56 56

Congress. ☽ cum fixis & Plane

Dies Mensis.	Nomen & Characteres fixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Distantia centri ☽ vera in latitudinem. G. M.
6	ε ♈ 4	11 34	0 47 B
7	η ♉ 3	7 7	0 28 B
10	δ ♊ 3	16 15	1 5 B
13	π ♌ 4	12 53	1 12 B
	A ♌ 5	14 46	1 21 B
20	A ♍ 5	17 14	0 35 B
24	2χ ♐ 5	17 50	1 10 B

FEBRUARIUS.

D. Menf.	Aetas ☽	Phænomena & Obfervationes ☽.
1	3	☽ ad κ τ λ ♒
2	4	☽ in Aequat. et ad κ λ ♓
3	5	☽ ad d ♓
4	6	☽ ad δ ε μ η π ♓
5	7	☽ ad ϑ μ ξ ♈
6	8	☽ ad π ε δ ζ ♈
7	9	☽ ad Plejad. η γ δ ε α ♉
8	10	☽ Perigæa et ad β ο ♉
9	11	Lunift. bor. et ad η μ ν ♊
10	12	☽ ad γ ε ζ λ ♊
11	13	☽ in nodo defc. et ad μ ζ ϑ ♋
12	14	☽ ad δ α κ ♋
13	15	☽ ad • π η α ♌
14	16	☽ ad c χ σ ♌
15	17	☽ in Aequat. et ad e υ ♌ β ♍
16	18	☽ ad η χ γ ♍
17	19	☽ ad ϑ α ♍
18	20	☽ ad κ λ ♍
19	21	☽ ad α μ ζ ♎
20	22	☽ ad γ κ η λ ϑ ♎ δ β ♏
21	23	☽ ad α τ ♏
22	24	☽ Apogæa et ad ϑ ζ Oph.
23	25	Lunift. auftr. et ad γ μ δ λ ♐
24	26	☽ ad ν ο τ π χ ♐
25	27	☽ in nodo afc. et ad ο ♐ β ♑
26	28	☽ ad η ϑ ♑
27	29	☽ ad ε γ κ λ δ μ ♑
28	30	☽ ad ϑ σ κ λ ♒

D. Menf.	Phænomena & Obfervationes Planetarum.
9	♂ ad γ ♋ h. 11. dift. centr. ♂ 1 gr. 17. m. bor.
	♀ in nodo fuo defcendente.
13	☿ ad ♀ dift. centr. ☿ 40 m bor.
14	♀ ad σ ♑ hor. 7. dift. centr. ♀ 45 m. auftr.
	☿ in digreffione maxima occ.
16	☿ in nodo fuo defcendente.
19	♂ in latit. max hel. bor.
	♃ ad 11 Oph. h. 19. dift. centr. ♃ 40 m. auftr.
21	♄ ad ϑ ♍ h. 23. dift. centr. ♄ 55 m. bor.
23	♀ ad ϑ ♑ h. 10. dift. centr. ♀ 5 m. auftr.
24	♂ ad 70 ♋ h. 10. dift. centr. ♂ 49m. auftr.
26	♀ ad ι ♑ h. 9. dift. centr. ♀ 35 m. bor.
27	☿ in Aphelio

Phafes Lunæ.	
6	Primus Quadrans h. 15. m. 18. in ♉ gr. 17. m. 57.
13	Plenilunium h. 9. m. 48. in ♌ gr. 24. m. 48.
21	Ultimus Quadrans h. 0. m. 26. in ♐ gr. 2. m. 28.
28	Novilunium h. 23. m. 33. in ♓ gr. 10. m. 28.

Planetæ in parallelis fixarum.

♅ menfe toto. ο Erid α Hydr.
♄ menfe toto. ο Ceti ε Oph.
♃ menfe toto 54 Erid. ε ♑
♂ 1. η μ ♊. 7. ξ Audr μ 59. 13. η ♉ 19. 132 ♉. 25 δ Herc.
♀ 1. β Corv. γ Lepor. 7. δ ♏ 13. β Lepor. 19. λ ♎. 25. γ ♑ β Can. maj.
☿ 1. ν ♏. 7. λ ♎. 13. 54 Erid. 19 λ ♎. 25. ϑ. 19 ♑.

FEBRUARIUS.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus [illegible]rum culminationis planetarum. H.	M.	Longitudo planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H	M.
♅ Uranie.												
1	10	51	16	20	20 ♎	55	0 B	39	7 A	35	21	49
7	10	24	15	53	20	50	0	39	7	33	21	22
13	9	57	15	26	20	44	0	39	7	31	20	55
19	9	31	15	0	20	37	0	39	7	29	20	29
25	9	5	14	34	20	29	0	39	7	27	20	3
♄ Saturnus.												
1	10	21	6	6	16 ♎	9	2 B	35	3 A	58	21	51
7	9	57	5	41	16	1	2	36	3	53	21	25
13	9	33	5	17	15	50	2	38	3	48	21	1
19	9	10	4	53	15	38	2	39	3	42	20	36
25	8	47	4	29	15	25	2	41	3	36	20	11
♃ Jupiter.												
1	14	37	9	4	2 ♐	43	0 B	54	19 A	51	23	31
7	14	17	8	44	3	29	0	54	19	59	23	11
13	13	56	8	23	4	11	0	55	20	6	22	49
19	13	37	8	2	4	48	0	55	20	12	22	27
25	13	16	7	41	5	21	0	56	20	17	22	6
♂ Mars.												
1	3	49	1	44	7 ♌	59	4 B	32	22 B	40	19	39
7	3	14	1	10	5	42	4	29	23	13	19	6
13	2	40	0	38	3	40	4	24	23	36	18	36
19	2	8	0	8	2	0	4	16	23	52	18	8
25	1	38	9	41	0	47	4	4	24	0	17	44
♀ Venus.												
1	17	48	22	0	13 ♑	29	0 B	22	22 A	26	2	12
7	17	50	22	8	20	55	0	5	21	46	2	26
13	17	52	22	15	28	21	0 A	12	20	43	2	38
19	17	52	22	23	5 ♒	47	0	28	19	19	2	54
25	17	51	22	30	13	13	0	42	17	34	3	9
☿ Mercurius.												
1	18	0	22	33	21 ♑	44	2 B	46	18 A	58	3	6
7	17	46	22	16	23	9	1	38	19	48	2	46
13	17	47	22	14	27	37	0 A	31	20	4	2	41
19	17	48	22	19	3 ♒	55	0	27	19	36	2	50
25	17	53	22	28	11	52	1	13	18	22	3	3

FEBRUARIUS.

Eclipses Satellitum Jovis.

I. Satelles.

D. Menf.	Immerfiones. H. M. S.	D. Menf.	Immerfiones. H. M. S.
1	5 12 9 V	22	10 52 15 V
3	11 40 14 M	24	5 20 49 V
5	6* 8 26 M	26	11 49.26 M
7	0 36 37 M	28	6* 13. 4 M
8	7 4 51 V		
10	1 33 7 V		
12	8 1 28 M		
14	2 29 47 M		
15	8 58 14 V		
17	3 26 40 V		
19	9 55 11 M		
21	4* 23 42 M		

II. Satelles.

D. Menf.	Immerfiones. H. M. S.
2	5* 32 0 M I
2	7 46 28 M E
5	6 47 26 V I
5	9 2 54 V E
9	8 4 13 M I
9	10 19 53 M E
12	9 21 1 V I
12	11 36 32 V E
16	10 38 1 M I
16	0 53 30 V E
19	11 55 12 V I
20	2 10 44 M E
23	1 12 16 V I
23	3 27 49 V E
27	2 29 34 M I
27	4* 45 7 M E

III. Satelles.

D. Menf.	H. M. S.
5	0 44 45 M I
5	2 46 25 M E
12	4* 41 29 M I
12	6* 43 44 M E
19	8 39 0 M I
19	10 41 46 M E
26	0 37 14 V I
26	2 40 34 V E

IV. Sat. ☌

4	11 15 56 M
21	5 10 51 M



Februarius

Dies	Situs	Satellitum ♃ tub. astr. hor. 4 mane		
1		4 2 1	○	3
2		4 3 2	○	1
3		3 4 1	○	2
4	2○	3 4	○	1
5		2 1 3	○	4
6			○	1 2 3 4
7			○	1 2 3 4
8		2 1	○	3 4
9		3 2	○	1 4
10		3 1	○	2 4
11		3	○	2 1 4
12		2 1 3	○	4
13			○	4 2 1 3
14	●I	4	○	2 3
15		4 2 1	○	3
16		4 2 3	○	1
17		4 3 1	○	2
18		4 3	○	2 1
19		4 2 1 3	○	
20	●2	4	○	1 3
21	●I 4 ☌		○	2 3
22	I○	2	○	4 3
23	3○	2	○	1 4
24		3 1	○	2 4
25		3	○	2 1 4
26		2 1 3	○	4
27	●2		○	1 3 4
28		1	○	2 3 4

Dies	Situs	Satellitum ♃ pro temp. Eclips. Vienn. vis.			
2		4 3 2	○	1	Imm. II.
5	●3	2 1	○	4	Imm. I.
12		2 1 3	○	4	Imm. III.
12		2 1 3	○	4	Em. III.
21		4 1	○	2 3	Imm. I.
28		1	○	2 4 3	Imm. I.

MARTIUS. ☉

Dies Astronomicus.	Dies mensis civilis.	Dies Hebdomadæ	MARTIUS.	Tempus medium Meridiei veri ☉ H. M. S. D.	Decrementum diurnum temp. medii. S. D.	Distantia ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero M. S. D.
60	1	Ven.	S. Albinus.	0 12.43. 8	12 1	1 12 2 7	3 44 [illegible]
61	2	Sab.	S. Simplicius	0 12.31. 7	12 6	1 8 18 4	3 43 9
62	3	*F. Dom.*	1. *Quadr.* S. Cun.	0 12.19. 1	13 1	1 4 34 5	3 43 4
63	4	Lun.	S. Casimirus	0 12. 6 0	13 6	1 0 51 1	3 42 9
64	5	Mart.	S. Euseb.&Soc.	0 11.52. 4	14 1	0 57 8 2	3 42 0
65	6	Merc.	Quat. Temp. †	0 11.38. 3	14 5	0 53 25 6	3 42 0
66	7	Jov.	S. Thom. Aq.	0 11.23. 8	14 9	0 49 43 6	3 41 6
67	8	Ven.	S. Joan. de Deo. †	0 11. 8. 9	15 3	0 46 2 0	3 41 3
68	9	Sab.	S. Francisca. †	0 10.53. 6	15 6	0 42 20 7	3 40 9
69	10	F. *Dom.*	2 *Quadr.* SS. 40 M.	0 10.38. 0	15 9	0 38 39 8	3 40 5
70	11	Lun.	S. Heraclius	0 10.22. 1	16 3	0 34 59 3	3 40 [illegible]
71	12	Mart.	S. Gregor. P.	0 10. 5. 8	16 8	0 31 19 2	3 39 8
72	13	Merc.	S. Rosina	0 9.49. 0	17 1	0 27 39 4	3 39 6
73	14	Jov.	S. Mathildis	0 9.31. 9	17 3	0 23 59 8	3 39 2
74	15	Ven.	S. Longinus.	0 9.14. 6	17 4	0 20 20 6	3 39 1
75	16	Sab.	S. Heribertus.	0 8 57. 2	17 6	0 16 41 5	3 38 9
76	17	F. Dom.	3 *Quadr.* S. Gertr.	0 8.39. 6	17 8	0 13 2 6	3 38 6
77	18	Lun.	S. Eduard	0 8.21. 8	18 0	0 9 24 0	3 38 5
78	19	Mart.	S. Josephus.	0 8. 3. 8	18 2	0 5 45 5	3 38 3
79	20	Merc.	S. Arch , pus	0 7.45. 6	18 3	0 2 7 2	3 38 3
80	21	Jov.	S. Bene ictus	0 7.27. 3	18 4	23 58 28 9	3 38 1
81	22	Ven.	S. Octavianus.	0 7. 8. 9	18 5	23 54 50 8	3 38 0
82	23	Sab.	S. Victorian	0 6.50. 4	18 4	23 51 12 8	3 38 0
83	24	*F. Dom.*	4. *Quadr.* S. Gabr.	0 6.32. 0	18 6	23 47 34 8	3 37 9
84	25	*Lun.*	*Ann. B.M.V.*	0 6.13. 4	18 6	23 43 56 9	3 38 0
85	26	Mart.	S. Theodor.	0 5.54. 8	18 5	23 40 18 9	3 37 9
86	27	Merc.	S. Rupertus	0 5.36. 3	18 5	23 36 41 0	3 37 9
87	28	Jov.	S. Guntram.	0 5.17. 8	18 5	23 33 3 1	3 38 1
88	29	Ven.	S. Cyrill.	0 4.59. 3	18 4	23 29 25 0	3 38 1
89	30	Sabb.	S. Quirin.	0 4.40. 9	18 4	23 25 46 9	3 38 2
90	31	*F. Dom*	1. *Quadr.* Pa T.	0 4 22. 5		23 22 8 7	

MARTIUS. ☉

Solis in meridiano versantis.

Dies Mensis.	Longitudo vera. ♓ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa H. M. S. D.	Declinatio vera Australis. G. M. S.	Altitudo centri ☉ vera G. M. S.
1	10. 28. 59	2. 30. 2	341.59.19	22.47.57. 3	7.38.43	34. 8 41
2	11. 29. 5	2. 30. 2	342 55.24	22.51.41. 6	7.15.53	34. 31 31
3	12. 29. 10	2. 30. 1	343.5[illegible] 22	22.55.25. 5	6.52.58	34. 54 26
4	13. 29. 14	2. 30. 0	344.47 13	22.59. 8. 9	6.29.56	35. 17 28
5	14. 29. 16	2. 29. 9	345.42 57	23. 2.51. 8	6. 6.49	35. 40 35
6	15. 29. 15	2. 29. 8	346.38 35	23. 6.34. 4	5.43.37	36. 3 47
7	16. 29. 12	2. 29. 8	347.34. 5	23.10.16. 4	5.20.20	36. 27 4
8	17. 29. 8	2. 29. 7	348.29.29	23.13.58. 0	4.57. 1	36. 50 23
9	18. 29. 2	2. 29. 6	349.24.49	23.17.39. 3	4.33.36	37. 13 48
10	19. 28. 52	2. 29. 5	350.20. 3	23 21.20. 2	4.10. 8	37. 37 16
11	20. 28. 41	2. 29. 4	351.15.11	23.25. 0. 7	3.46.38	38. 0 46
12	21. 28. 27	2. 29. 3	352.10.13	23.28.40. 8	3.23. 5	38. 24 19
13	22. 28. 11	2. 29. 3	353. 5.10	23.32.20. 6	2.59.30	38. 47 54
14	23. 27. 52	2. 29. 2	354. 0. 3	23.36. 0. 2	2.35.53	39. 11 31
15	24. 27. 31	2. 29. 1	354 54 52	23.39.39. 4	2.12.14	39. 35 10
16	25. 27. 9	2. 29. 1	355.49.38	23.43.18. 5	1.48.23	39. 59 1
17	26. 26. 45	2. 29. 0	356.44.21	23.46.57. 4	1.24 52	40. 22 32
18	27. 26. 19	2. 28. 9	357.39. 1	23.50.36. 0	1. 1.11	40. 46 13
19	28. 25. 51	2. 28. 9	358.33.38	23 54.14. 5	0.37.30	41. 9 54
20	29. 25. 20	2. 28. 8	359.28 12	23.57.52. 8	0.13.49	41. 33 35
					B	
21	0. ♈ 24. 48	2. 28. 7	0.22.45	0. 1.31. 1	0. 9.52	41. 57 2
22	1. 24. 14	2. 28. 6	1.17 17	0. 5. 9. 2	0.33.32	42. 20 5
23	2. 23. 39	2. 28. 5	2.11.47	0. 8.47. 2	0.57.11	52. 44 3
24	3. 23. 2	2. 28. 4	3. 6.17	0 12.25. 2	1.20.48	43. 8 1
25	4. 22. 23	2. 28. 4	4. 0.46	0.16. 3. 1	1.44 23	43. 31 4
26	5. 21. 42	2. 28. 3	4.55.15	0.19.41. 1	2. 7.56	43. 55 2
27	6. 21. 0	2. 28. 2	5.49.44	0.23.19. 0	2.31.27	44. 18 5
28	7. 20. 17	2. 28. 1	6.44 13	0.26.56. 9	2.54 55	44. 42 1
29	8. 19. 32	2. 28. 0	7.38.44	0.30.35. 0	3.18.19	45. 5
30	9. 18. 45	2. 27. 9	8.33.16	0.34.13. 1	3.41 40	45. 29
31	10. 17. 55	2. 27. 8	9.27.48	0.37.51. 3	4 4.56	45. 52

MARTIUS. ☉

Dies Mensis.	Solis in Meridiano versantis: Diameter ☉ apparens. M.	S.	D.	Mora transitus diſci ☉ per meridianum. M.	S.	D.	Diſtantia ☉ a ♁ cujus diſtant. med. 10000.	Ortus Centri ☉ verus. H.	M.	Occaſus centri ☉ verus. H.	M.
1	32	21	5	2	10	5	9916	18	34	5	26
2	32	21	0	2	10	4	9918	18	32	5	28
3	32	20	5	2	10	2	9921	18	30	5	30
4	32	20	0	2	10	1	9923	18	28	5	32
5	32	19	5	2	9	9	9926	18	26	5	34
6	32	19	0	2	9	8	9929	18	24	5	36
7	32	18	6	2	9	7	9932	18	22	5	38
8	32	18	1	2	9	6	9934	18	20	5	40
9	32	17	5	2	9	5	9937	18	18	5	42
10	32	17	0	2	9	4	9940	18	16	5	44
11	32	16	5	2	9	3	9942	18	15	5	45
12	32	16	0	2	9	2	9945	18	13	5	47
13	32	15	4	2	9	1	9948	18	12	5	48
14	32	14	8	2	9	1	9950	18	10	5	50
15	32	14	2	2	9	0	9953	18	9	5	51
16	32	13	7	2	8	9	9956	18	7	5	53
17	32	13	1	2	8	9	9959	18	5	5	55
18	32	12	6	2	8	8	9 62	18	3	5	57
19	32	12	0	2	8	7	9965	18	1	5	59
20	32	11	4	2	8	7	9967	18	0	6	0
21	32	10	8	2	8	6	9970	17	59	6	1
22	32	10	3	2	8	6	9973	17	57	6	3
23	32	9	7	2	8	6	9976	17	55	6	5
24	32	9	1	2	8	5	9979	17	53	6	7
25	32	8	6	2	8	5	9982	17	51	6	9
26	32	8	0	2	8	5	9984	17	49	6	11
27	32	7	5	2	8	5	9987	17	47	6	13
28	32	6	9	2	8	5	9990	17	45	6	15
29	32	6	4	2	8	5	9993	17	43	6	17
30	32	5	8	2	8	6	9996	17	41	6	19
31	32	5	3	2	8	6	9999	17	40	6	20

Dies Menſis.	Phænomena & Obſervationes ☉
4	☉ in parall. ι Orion c. h. 6. m. 21.
6	☉ in parall. h Erid. c. h. 5. m. 46.
8	☉ in parall. ϑ ♍ c. h. 13. m. 40.
12	☉ in parall. δ Oph. culm. h. 16 m. 29.
14	☉ in parall. ζ Orion. culm. h. 5. m. 50.
16	☉ in parall. ε Orion. culm h. 5. m 38.
18	☉ in parall. δ Orion. culm. h. 5. m. 26.
20	Ingreſſus ☉ in 0 ♈ h. 13. m. 59.
21	☉ in parall. ζ ♍ c. h. 13. m. 17.
31	☉ in parall. δ ♍ c. h. 12. m. 2.
	☉ in diſtantia media.

MARTIUS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	S.	Longitudo vera ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Declinatio vera ☽ G. M. S.	Nodus ☽ ascendens G. M.	Diameter ☽ horizontalis. M. S.	Parallaxis ☽ horizontalis. M. S.	Tempus culm. ☽ H. M
1	♓	10 42 6	B 3 41 27	A 4 8 45	23 23	31 14	57 13	☌
2		24 9 4	4 25 27	B 1 44 8	23 20	31 32	57 46	0 41
3	♈	7 51 19	4 54 30	7 37 31	23 17	31 48	58 14	1 29
4		21 45 9	5 6 58	13 13 27	23 14	32 0	58 37	2 19
5	♉	5 47 4	5 1 13	18 11 32	23 11	32 10	58 54	3 12
6		19 53 53	4 37 21	22 10 49	23 8	32 16	59 5	4 8
7	♊	4 2 42	3 56 27	24 50 56	23 4	32 19	59 11	5 6
8		18 10 38	3 1 11	25 56 48	23 1	32 20	59 13	6 8
9	♋	2 17 26	1 55 0	25 21 38	22 58	32 19	59 9	7 9
10		16 21 4	0 42 6	23 9 32	22 55	32 13	59 1	8 8
11	♌	0 20 37	A 0 32 51	19 33 48	22 52	32 8	58 49	9 4
12		14 14 28	1 45 14	14 53 44	22 49	31 57	58 30	9 57
13		28 0 49	2 50 39	9 30 21	22 45	31 43	58 6	10 45
14	♍	11 37 22	3 45 21	3 44 18	22 42	31 27	57 37	11 32
15		25 1 14	4 25 45	A 2 5 7	22 39	31 13	57 4	12 17
16	♎	8 10 13	4 52 40	8 31 52	22 36	30 52	56 29	13 3
17		21 2 48	5 3 7	12 53 32	22 33	30 32	55 54	13 49
18	♏	3 38 35	4 58 37	17 25 4	22 30	30 13	55 20	14 36
19		15 58 27	4 40 5	21 6 1	22 26	29 58	54 53	15 24
20		28 4 29	4 9 9	23 47 48	22 23	29 46	54 31	16 14
21	♐	10 0 58	3 27 43	25 24 2	22 20	29 39	54 18	17 4
22		21 50 27	2 37 31	25 50 3	22 17	29 37	54 15	17 55
23	♑	3 39 35	1 40 39	25 5 21	22 14	29 40	54 21	18 45
24		15 33 12	0 39 3	23 12 13	22 11	29 50	54 38	19 34
25		27 37 0	B 0 25 9	20 14 29	22 7	30 5	55 4	20 21
26	♒	9 55 54	1 29 26	16 20 30	22 4	30 24	55 39	21 8
27		22 34 15	2 30 45	11 37 42	22 1	30 47	56 22	21 54
28	♓	5 35 12	3 25 52	6 16 49	21 58	31 11	57 7	22 40
29		19 0 3	4 11 34	0 29 56	21 55	31 35	57 51	23 28
30	♈	2 47 36	4 43 54	B 5 27 2	21 52	31 58	58 33	☌
31		16 54 58	5 1 45	11 17 33	21 49	32 18	59 8	0 1

MARTIUS. ☽

Dies Mensis.	Loca Lunae media nocte. — Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.	Congress. ☽ cum fixis & Planet. — Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H.	M.	Distantia centri vera in latitudin. G. M.
1	♓ 17.23.28	(B) 4 5 2	31.24	57.30	4	η ♓ 5	4	2	0 16 B
2	♈ 0.58.29	4 41 52	31.40	58. 1	6	η ♉ 3	12	31	0 17 B
3	14.47. 3	5 2 57	31.55	58.27	20	σ ♏ 4	14	4	0 14 B
4	28.45.15	5 6 24	32. 6	58.47		α ♏ 1	18	2	0 53 B
5	♉ 12.50. 5	4 51 31	32.13	59. 1					
6	26.58.12	4 18 52	32.19	59. 9					
7	♊ 11. 7. 3	3 30 26	32.20	59.13					
8	25.14.23	2 29 7	32.20	59.12					
9	♋ 9.19.42	1 19 11	32.16	59. 6					
10	23.21.26	0 4 36	32.10	58.56					
11	♌ 7.18.24	(A) 1 9 42	32. 2	58.41					
12	21. 8.38	2 19 5	31.51	58.19					
13	♍ 4.50.30	3 19 32	31.36	57.53					
14	18.21. 3	4 7 46	31.18	57 21					
15	♎ 1.37.43	4 41 33	31. 0	56.46					
16	14.38.37	4 59 53	30.41	56.11					
17	27.22.48	5 2 44	30.21	55.36					
18	♏ 9 50.23	4 51 0	30. 5	55. 5					
19	22. 3. 2	4 26 4	29.51	54.40					
20	♐ 4. 3.32	3 49 38	29.42	54.23					
21	15.55.54	3 3 35	29.37	54.14					
22	27.44.48	2 9 45	29.37	54.16					
23	♑ 9.35.28	1 10 21	29.45	54.28					
24	21.33.33	0 7 8	29.53	54.49					
25	♒ 3.44.16	(B) 0 57 31	30.13	55.19					
26	16.12.27	2 0 34	30.35	55.59					
27	29. 1.46	2 59 20	31. 0	56 44					
28	♓ 12.14.39	3 50 13	31.24	57.30					
29	25.51.10	4 29 38	31.47	58.13					
30	♈ 9.48.57	4 54 4	32. 9	58.52					
31	24. 4.23	5 0 51	32.26	59.23					

MARTIUS.

Dies Mensis.	Aetas ☾	Phænomena & Observationes ☽
1	1	☽ in Aequat. ☽ κ λ ♓
2	2	☽ ad 30. 33 ♓
3	3	☽ ad δ ε ♓
4	4	☽ ad μ η π ν ο ♓
5	5	☽ ad μ π σ ε δ ♈
6	6	☽ ad Plejad. η ♉
7	7	Lunist. bor. et ad δ ϑ α τ ♉
8	8	☽ Perigæa et ad β ο ζ ♉
9	9	☽ ad η μ ν γ ε ♊
10	10	☽ ad c κ ω ♊ μ ζ ♋
11	11	☽ ad ϑ γ δ α κ ♋
12	12	☽ in nodo desc. et ad ξ ο ν π ♌
13	13	☽ ad ρ ♌
14	14	☽ in Aequat. et ad σ τ e υ ♌
15	15	☽ ad ν β η ♍
16	16	☽ ad χ γ κ ♍
17	17	☽ ad α κ ♍
18	18	☽ ad α ζ ♎
19	19	☽ ad γ κ η ♎
20	20	☽ ad π δ β σ α τ ♏
21	21	☽ Apogæa et ad ρ ϑ Oph.
22	22	Lunist. austr. et ad γ μ ♐
23	23	☽ ad φ ν σ ο τ π ♐
24	24	☽ ad ρ ω ♐
25	25	☽ ad σ β π ρ ♑
26	26	☽ ad η ϑ ε γ κ ♑
27	27	☽ in nodo asc. et ad λ δ μ ♑
28	28	☽ ad λ φ ψ ♒
29	29	☽ in Aequat et ad κ λ ♓
30	1	☽ ad δ ε ♓
31	2	☽ ad μ η π ν ♓

Dies Mensis.	Phænomena & Observationes Planetarum.
7	☿ in nodo suo ascendente.
14	♀ in Aphelio.
23	♂ in Aphelio.
26	♄ ad 424 ♍ h. 3. dist. centr. ♄ 10 min. austr.
31	Conjunctio ☿ et ☉ superior.

	Phases Lunæ.
7	Primus Quadrans hor. 22. min. 44. in ♊ gr. 17. m. 26.
14	Plenilunium hor. 22. m. 55. in ♍ gr. 24. m. 25.
22	Ultimus Quadrans hor. 21. m. 48. in ♑ gr. 2. m. 17.
30	Novilunium hor. 11. m. 59. in ♈ gr. 9. m. 48.

Planetæ in parallelis fixarum.

♅ mense toto φ ♒ ο Erid.
♄ mense toto ο ♒ δ Oph.
♃ mense toto ε ♑ 54 Erid.
♂ 1. 7. η ♉. 13. 19. 25. ζ Andr. μ ♋.
♀ 1. γ Corv. 7. γ ♎ γ Erid. 13. ι ♍. 19. κ ♍. 25. β ♒.
☿ 1. δ ♑. 7. π Ceti. 53 Erid. 13. η Ceti.

MARTIUS.

Dies Mensis	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G	M.	Declinatio Planetarum Sole culminante G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	8	53	14	22	20 ♎	25	0 B	39	7 A	23	19	51
7	8	29	13	59	20	13	0	39	7	18	19	29
13	8	6	13	36	20	0	0	39	7	13	19	6
19	7	43	13	14	19	46	0	39	7	8	18	45
25	7	22	12	53	19	31	0	39	7	3	18	24
					♄ *Saturnus.*							
1	8	27	14	14	15 ♎	9	2 B	42	3 A	30	20	1
7	8	3	13	51	14	46	2	42	3	20	19	39
13	7	38	13	27	14	22	2	43	3	10	19	16
19	7	13	13	3	13	57	2	44	3	0	18	53
25	6	49	12	39	13	31	2	45	2	50	18	29
					♃ *Jupiter.*							
1	13	3	17	28	5 ♐	36	0 B	56	20 A	22	21	53
7	12	42	17	7	5	54	0	56	20	24	21	32
13	12	20	16	45	6	6	0	57	20	25	21	10
19	11	59	16	23	6	14	0	58	20	26	20	47
25	11	37	16	1	6	18	0	58	20	26	20	25
					♂ *Mars.*							
1	1	19	9	22	0 ♌	8	3 B	57	23 B	59	17	25
7	0	58	8	59	29 ♋	41	3	45	23	53	17	0
13	0	37	8	37	29	42	3	32	23	40	16	37
19	0	19	8	17	0 ♌	7	3	19	23	22	16	15
25	0	1	7	58	0	56	3	6	23	1	15	55
					♀ *Venus.*							
1	17	50	22	36	18 ♒	10	0 A	51	16 A	14	3	22
7	17	45	22	43	25	36	1	2	14	0	3	41
13	17	40	22	49	3 ♓	2	1	11	11	53	3	58
19	17	35	22	56	10	29	1	19	8	56	4	17
25	17	27	23	2	17	54	1	25	6	7	4	37
					☿ *Mercurius.*							
1	17	52	22	35	17 ♒	45	1 A	37	17 A	4	3	18
7	17	53	22	48	26	45	2	4	14	32	3	43
13	17	54	23	4	6 ♓	27	2	14	11	12	4	14
19	17	52	23	21	16	53	2	8	7	8	4	50
25	17	50	23	40	28	4	1	46	[illegible]	22	5	30

MARTIUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Immersiones. H. M. S.	D. Mensis.	Immersiones. H. M. S.	D. Mensis.	Immersiones. H. M. S.	D. Mensis	H. M. S.
2	0 46 48 M	23	6 32.48 M	2	3 46 54 V I	5	4 36 53 V I
3	7 15 28 V	25	1* 2. 2 M	2	6 2 31 V E	5	6 40 45 V E
5	1 44 13 V	26	7 30.38 V		Immersiones	12	8 36 10 V I
7	8 13 0 M	28	1 59.35 V	6	5* 4 20 M	12	10 41 41 V E
9	2*41 45 M	30	8 28.35 M	9	6 21 50 V	20	0 35 57 M I
10	9 10 35 V			13	7 39 23 M	20	2*41 8 M E
1	3 39 25 V			16	8 57 0 V	27	4*35 21 M I
14	10 8 17 M			20	10 14 36 M	27	6 41 8 M E
16	4*37 11 M			23	11 32 15 V		
17	11 6 2 V			27	0 49 52 V		
19	5 34 54 V			31	2* 7 28 M		
2	0 3 50 V						
							IV. Sat. ♂
						9	11 9 28 V
						26	5 10 19 V



Martius

Dies	Situs Satellitum ♃ tub. astr. hor. 2 mane (occ.)		(or.)	
1	2○		1• 4• 3•	
2	●I	2•	3•	4○
3		4 •3 2• 1•	•2	
4		4• 3•	•1 2•	
5		4• •3 2• 1•		
6		4• •2	•3 •1	
7		•4 •1	•2 •3	
8		•4	1• 3•	2○
9		•4 •2	3•	●I
10		3• •4	•2	I○
11		3•	•1 2• •4	
12		•3 2• 1•	•4	
13	●3	•2	•1 •4	
14		1•	•2 •3 •4	
15			2• 1• 3• 4•	
16		2•	1• 3• 4•	
17		3•	•1 2 4•	
18		•3•	•1 4 •2•	
19		•3 2• 4• 1•		
20	●3	4• •2	•1	
21		4• 1•	•2 •3	
22		4•	2• 1• 3•	
23		4• 2• •1	3•	
24		•4 3•	1•	●2
25		•4 3•	2•	●1
26		•3 •4 2• 1•		
27		•2 •3 4	•1	
28		1•	3 •2 4	
29			2• 1• •3 •4	
30		2• •1	3• •4	
31	2○	3•	1• •4	

Dies	Situs Satellitum ♃ pro temp. Eclips. Viennæ			
6	4•	•2	•1 •3	Imm. II.
9		•4 •2 •1	3•	Imm. I.
16	Imm. I.	•2 •1	3• 4•	
20		4• •2 •3	•1	Em. III.
25		•4 3• •1	2•	Imm. I.
27	4●	•2 •3	•1	Imm. III.
31	Imm. II.	3 •2	1• •4	

APRILIS. ☉

Dies Astronom.	Dies Mensis Civ.	Dies Hebdomad.	APRILIS.	Tempus Medium Meridiei veri ☉ H. M. S. D.	Decrementum diurnum Temporis medii. S. D.	Distantia ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D.
91	1	Lun.	S. Hugo Ep.	0. 4. 4.2	18. 4	23 18 30 7	3. 38. 2
92	2	Mart.	S. Franc. de R.	0. 3.45.8	18. 2	23 14 52 5	3. 38. 4
93	3	Merc.	S. Richardus	0. 3.27.6	18. 0	23 11 14 1	3. 38. 4
94	4	Jovis	S. Isidorus.	0. 3. 9.6	17. 9	23 7 35 7	3. 38. 6
95	5	Ven.	Fest. Dol. B. V. M	0. 2.51.7	17. 8	23 3 57 1	3. 38. 8
96	6	Sabb.	S. Cœlestinus.	0. 2 33.9	17. 5	23 0 18 3	3. 39. 0
97	7	*F Dom.*	6. *Quadr. Palm.*	0. 2.16 4	17. 2	22 55 39 3	3. 39. 3
98	8	Lun.	S. Dionysius	0. 1 59.2	17. 0	22 53 0 0	3. 39. 5
99	9	Mart.	S. Demetrius	0. 1.42 2	16. 9	22 49 20 5	3. 39. 6
100	10	Merc.	S. Ezech. Pr.	0. 1.25.3	16. 7	22 45 40 9	3. 39. 9
101	11	Jov.	Coena Domini.	0. 1. 8 6	16. 4	22 42 1 0	3. 40. 1
102	12	Ven.	Parasceve.	0. 0.52.2	16. 1	22 38 20 9	3. 40. 4
103	13	Sabb.	Sabbathum S.	0. 0.36.1	15. 8	22 34 40 5	3. 40. 7
104	14	*F. Dom*	*Pascha*	0. 0.20.3	15. 5	22 30 59 8	3. 41. 1
105	15	*Lun.*	*Fer. II. Pasch.*	0. 0. 4.8	15. 0	22 27 18 7	3. 41. 5
106	16	Mart.	S. Callistus	23.59.49.8	14. 6	22 23 37 2	3. 41. 9
107	17	Merc.	S. Anicetus	23 59.35 2	14. 3	22 19 55 3	3. 42. 3
108	18	Jov.	S. Apollonius	23 59.20.9	14. 0	22 16 13 0	3. 42. 6
109	19	Ven.	S. Crescent.	23.59. 6.9	13. 5	22 12 30 4	3. 42. 9
110	20	Sabb.	S. Agnes Pol.	23.58.53.4	13. 1	22 8 47 5	3. 43. 4
111	21	*F. Dom.*	1. *in Alb.* S. An.	23.58.40 3	12. 7	22 5 4 1	3. 43. 8
112	22	Lun.	SS Sot. & Caj.	23.58.27.6	12. 2	22 1 20 3	3. 44. 4
113	23	Mart.	S. Adalbertus.	23.58.15.4	11. 6	21 57 35 7	3. 45. 0
114	24	Merc.	S. Georgius.	23 58. 3 8	11. 0	21 53 50 7	3. 45. 4
115	25	Jov.	S. Marc. Ev.	23.57 52.8	10. 4	21 50 5 3	3. 45. 9
116	26	Ven.	SS Clet. & S.	23.57 42.4	10. 0	21 46 19 4	3. 46. 4
117	27	Sabb.	S. Peregrin.	23.57.32.4	9. 7	21 42 33 0	3. 46. 9
118	28	*F. Dom.*	2. S. Vitalis M.	23.57.22.7	9. 3	21 38 46 1	3. 47. 4
119	29	Lun.	S. Petr. M.	23.57.13.4	8. 7	21 34 58 7	3. 48. 0
120	30	Mart.	S. Cath. Sen.	23.57. 4.7		21 31 10 7	

APRILIS ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♈ G.	M.	S.	Motus horarius verus. M.	S.	Ascensio recta. G.	M.	S.	Ascensio recta conversa. H.	M.	S.	D.	Declinatio vera Borealis G.	M.	S.	Altitudo Centri ☉ vera. G.	M.	S.
1	11.	17.	3	2.	27. 6	10	22	0	0	41	29.	3	4	28	8	46	15	32
2	12.	16.	8	2.	27. 5	11	16	53	0.	45.	7.	5	4	51	14	46	38	38
3	13.	15.	11	2.	27. 4	12	11	28	0.	48	45.	9	5	14	15	46	58	39
4	14	14.	11	2.	27. 4	13	6	5	0.	52.	24.	3	5	37	11	47	24.	35
5	15.	13.	9	2.	27. 3	14	0	44	0.	56.	2.	5	6	0	11	47	47.	35
6	16.	12.	5	2.	27. 2	14	55	26	0.	59.	41.	7	6	22	44	48.	10.	8
7	17.	11.	0	2.	27. 1	15	50	11	1.	3.	20.	7	6	45	11	48	32.	35
8	18.	9.	53	2.	27. 0	16	45	0	1.	7.	0.	0	7.	7	51	48.	55.	15
9	19.	8.	43	2.	26. 9	17	39	52	1.	10.	39.	5	7	30	14	49.	17	38
10	20.	7.	30	2.	26. 8	18	34	47	1	14	19.	1	7	52	29	49.	39	53
11	21.	6.	15	2.	26. 6	19	29	44	1.	17	59.	0	8	14	37	50.	2.	1
12	22.	4.	58	2.	26. 6	20	24	46	1.	21	39.	1	8	36	35	50.	23	59
13	23.	3.	38	2.	26. 5	21	19	52	1.	25.	19.	5	8	58	25	50.	45.	49
14	24.	2.	16	2.	26. 4	22	15	2	1.	29	0.	2	9	20	5	51.	7	29
15	25.	0.	52	2.	26. 4	23	10	18	1.	32.	41.	3	9	41	37	51.	29.	1
16	25.	59.	27	2.	26. 3	24	5	41	1.	36.	22.	8	10	3	0	51.	50.	24
17	26.	58.	0	2.	26. 2	25	1	10	1	40.	4.	7	10	24	12	52.	11.	36
18	27.	56.	31	2.	26. 1	25	56	44	1.	43	47.	0	10	45	14	52.	32.	38
19	28	54.	59	2.	26 1	26	52	23	1	47	29	6	11	6	5	52.	53.	29
20	29.	53.	26	2.	26. 0	27	48	7	1.	51	12	5	11	26	45	53.	14.	9
21	0 ♉	51.	53	2.	25. 9	28	43	57	1	54	55.	9	11	47	15	53.	34.	39
22	1.	50.	18	2.	25. 8	29	39	45	1.	58.	39.	7	12	7	34	53.	54	58
23	2	48.	42	2.	25. 7	30	36	2	2.	2.	24.	3	12	27	40	54.	15.	4
24	3.	47.	4	2.	25. 6	31	32	17	2	6.	9.	3	12	47	34	54.	34.	58
25	4.	45.	23	2.	25. 6	32	28	39	2.	9.	54.	7	13	7	17	54.	54.	41
26	5.	43	41	2.	25. 5	33	25	48	2	13.	40.	6	13	26	46	55.	14	10
27	6.	41.	59	2	25. 5	34	21	44	2	17.	27.	0	13	46	1	55	33.	25
28	7.	40.	16	2.	25. 4	35	18	27	2.	21.	13.	9	14	5	4	55.	52.	28
29	8.	38.	31	2.	25. 4	36	15	19	2.	25.	1.	3	14	23	53	56.	11.	17
30	9.	36.	44	2.	25. 3	37	12	19	2.	28.	49.	3	14	42	29	56.	29.	53

APRILIS. ☉

Dies Mensis.	Solis in Meridiano versantis. Diameter ☉ apparens. M.	S.	D.	Mora transitus disci ☉ per Meridianum. M.	S.	D.	Distantia ☉ à ♁, cujus Distantia media 10000.	Ortus centri ☉ verus. H.	M.	Occasus centri ☉ verus. H.	M.
1	32	4	8	2	8	6	10002	12	39	6	21
2	32	4	2	2	8	6	10005	17	37	6	23
3	32	3	7	2	8	7	10008	17	35	6	25
4	32	3	1	2	8	8	10011	17	33	6	27
5	32	2	5	2	8	8	10014	17	32	6	28
6	32	2	0	2	8	9	10017	17	30	6	30
7	32	1	4	2	9	0	10020	17	29	6	31
8	32	0	9	2	9	1	10023	17	27	6	33
9	32	0	4	2	9	2	10026	17	25	6	35
10	31	59	8	2	9	3	10029	17	24	6	36
11	31	59	3	2	9	4	10032	17	22	6	38
12	31	58	8	2	9	5	10035	17	20	6	40
13	31	58	6	2	9	5	10037	17	19	6	41
14	31	57	7	2	9	6	10040	17	17	6	43
15	31	57	2	2	9	7	10043	17	15	6	45
16	31	56	7	2	9	8	10046	17	14	6	46
17	31	56	2	2	9	9	10049	17	12	6	48
18	31	55	7	2	10	0	10052	17	10	6	50
19	31	55	1	2	10	2	10054	17	9	6	51
20	31	54	6	2	10	3	10057	17	7	5	53
21	31	54	1	2	10	4	10059	17	5	6	55
22	31	53	6	2	10	6	10062	17	3	6	57
23	31	53	1	2	10	7	10065	17	2	6	58
24	31	52	6	2	10	8	10067	17	1	6	59
25	31	52	0	2	11	0	10069	17	0	7	0
26	31	51	5	2	11	1	10071	16	58	7	2
27	31	51	0	2	11	2	10074	16	56	7	4
28	31	50	6	2	11	4	10076	16	54	7	6
29	31	50	1	2	11	5	10079	16	52	7	8
30	31	49	6	2	11	6	10081	16	51	7	9

Dies Mensis.	Phænomena & Observationes. ☉
3	☉ in parall. Procyon. culm. h. 6. m. 35.
7	☉ in parall. α Orion. c. h. 4. m. 36.
11	☉ in parall. β Can. min. c. h. 5. m. 53.
14	☉ in parall. β ♋ culm. h. 6. m. 32.
20	Ingressus ☉ in ♉ h. 2. m. 42.
21	☉ in parall. ε ♍ c. h. 10. m. 52.
23	☉ in parall. α Oph. culm. h. 15. m. 17.
24	☉ in parall. Regul. ♌ h. 7. min. 46.
29	☉ in parall. α Herc. culm. h. 14. m. 35.
30	☉ in parall. α Delph. culm. h. 17. m. 55.

APRILIS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽				Latitudo vera ☽			Declinatio vera ☽			Nodus ☽ ascendens.		Diam. ☽ horizontalis.		Parallaxis ☽ horizontalis.		Tempus culm. ☽	
	S.	G.	M	S.	G.	M.	S.	G.	M.	S.	G.	M.	M.	S.	M.	S.	H.	M
						B			B									
1	♉	1	16	29	4	57	7	16	34	0	21 ♑	44	32	31	59	33	1	11
2		15	46	5	4	35	32	20	58	0	21	41	32	38	59	46	2	7
3	♊	0	16	49	3	56	11	24	4	37	21	38	32	40	59	48	3	7
4		14	43	10	3	1	47	25	35	53	21	35	32	35	59	41	4	9
5		29	1	13	1	56	18	25	23	55	21	32	32	27	59	25	5	12
6	♋	13	8	37	0	43	31	23	32	11	21	29	32	16	59	5	6	12
						A												
7		27	4	37	0	29	1	20	17	27	21	25	32	2	58	41	7	8
8	♌	10	49	9	1	39	58	15	56	5	21	22	31	48	58	14	8	1
9		24	22	54	2	44	8	10	49	38	21	19	31	32	57	46	8	50
10	♍	7	46	6	3	38	18	5	17	14	21	16	31	16	57	17	9	36
									A									
11		20	58	26	4	19	44	0	23	50	21	13	31	6	56	47	10	21
12	♎	3	59	35	4	47	6	5	58	39	21	10	30	45	56	18	11	6
13		16	49	3	5	0	22	11	13	56	21	6	30	29	55	48	11	51
14		29	26	6	4	56	34	15	54	0	21	3	30	13	55	20	12	37
15	♏	11	50	29	4	39	46	19	50	4	21	0	29	59	54	55	13	25
16		24	2	47	4	10	14	22	50	13	20	57	29	48	54	35	14	15
17	♐	6	4	29	3	29	51	24	47	19	20	54	29	40	54	19	15	5
18		17	57	58	2	40	36	25	35	5	20	51	29	35	54	11	15	55
19		29	46	44	1	44	38	25	12	27	20	47	29	35	54	10	16	45
20	♑	11	34	51	0	44	14	23	41	37	20	44	29	38	54	17	17	34
						B												
21		23	27	36	0	18	47	21	6	53	20	41	29	48	54	35	18	21
22	♒	5	30	10	1	21	55	17	35	23	20	38	30	4	55	3	19	7
23		17	48	29	2	22	20	13	15	7	20	35	30	25	55	42	19	52
24	♓	0	26	16	3	17	38	8	14	50	20	32	30	51	56	28	20	37
25		13	29	7	4	4	31	2	44	9	20	28	31	18	57	19	21	23
									B									
26		26	59	13	4	39	18	3	4	13	20	25	31	47	58	12	22	12
27	♈	10	56	44	4	58	56	8	54	57	20	22	32	14	59	2	23	4
28		25	18	58	5	0	41	14	27	40	20	19	32	38	59	46	23	59
29	♉	10	0	33	4	39	43	19	15	1	20	16	32	55	60	18		☌
30		24	53	19	4	5	29	22	58	32	20	13	33	4	60	35	1	0

APRILIS. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Paralaxis. ☽ horizontalis M. S.
		B		
1	♉ 8.30.48	4 48 42	32 36	59 42
2	23. 1.40	4 17 58	32 41	59 49
3	♊ 7.30.52	3 30 32	32 39	59 47
4	21.53.22	2 30 8	32 32	59 34
5	♋ 6. 6.16	1 20 57	32 21	59 16
6	20. 8. 4	0 7 40	32 9	58 53
		A		
7	♌ 3 58.17	1 5 7	31 56	58 28
8	17 37 19	2 13 8	31 40	58 0
9	♍ 1. 5 53	3 12 39	31 24	57 31
10	14.23.38	4 0 40	31 9	57 3
11	27.30.27	4 35 18	30 53	56 33
12	♎ 10 25 49	4 55 6	30 37	56 3
13	23. 9 12	4 59 46	30 21	55 34
14	♏ 5.39 48	4 49 51	30 6	55 7
15	17.58. 4	4 26 29	29 54	54 44
16	♐ 0. 4.49	3 51 16	29 43	54 26
17	12. 2. 9	3 6 13	29 36	54 13
18	23.52.43	2 13 17	29 35	54 9
19	♑ 5.40.33	1 14 47	29 35	54 11
20	17.30.21	0 12 56	29 42	54 23
		B		
21	29.27 21	0 50 31	29 55	54 47
22	♒ 11.36 47	1 52 37	30 13	55 21
23	24. 4.18	2 50 45	30 37	56 3
24	♓ 6.54.27	3 42 19	31 4	56 53
25	20 10.41	4 23 43	31 32	57 46
26	♈ 3.54.34	4 51 12	32 1	58 39
27	18. 5. 0	5 2 11	32 27	59 26
28	♉ 2.37 51	4 54 11	32 48	60 5
29	17.26. 4	4 26 27	33 2	60 30
30	♊ 2.21.16	3 40 24	33 7	60 39

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Distantia centri ☽ vera in latitudinem. G. M.
8	ξ ♌ 4	14 19	0 51 B
16	α ♏ 1	9 39	1 0 B
	π ♏ 3	12 16	1 36 B

APRILIS.

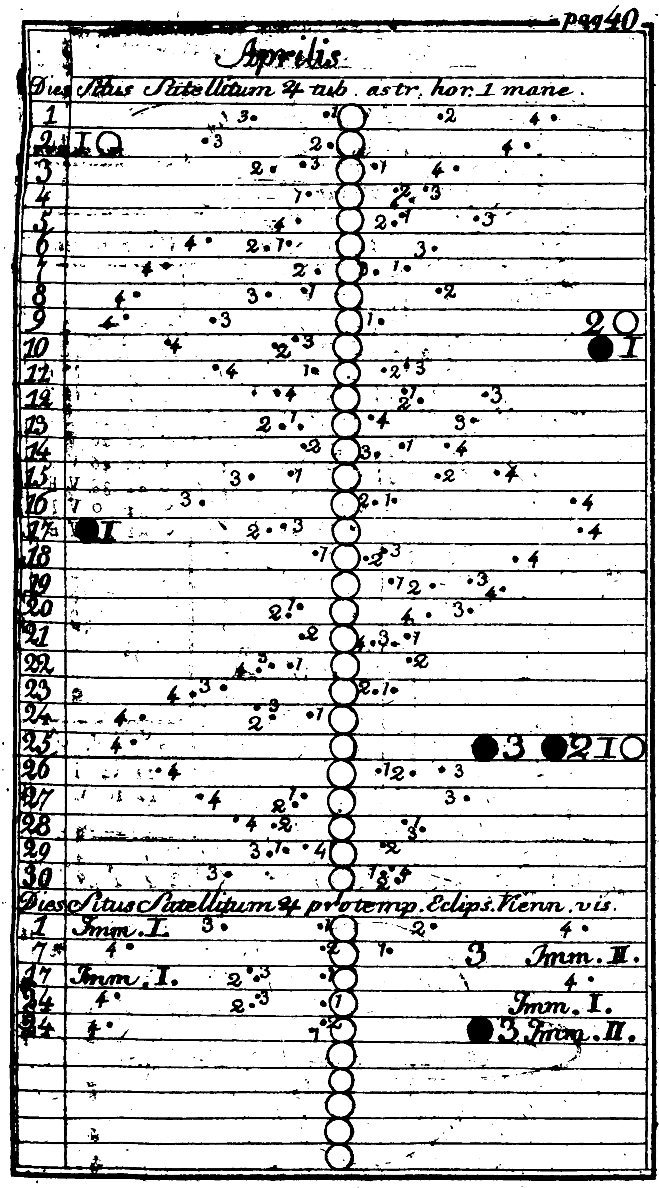
Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Immersiones. H. M. S.	D. Mens.	Immersiones. H. M. S.	D. Mens.	Immersiones. H. M. S.	D. Mens.	H. M. S.
1	2* 57 26 M	22	8 44.37 M	3	3 25 4 V	3	8 34 34 M I
2	9 26 24 V	24	3* 13 22 M	7	4* 42 23 M	3	10 41 6 M E
4	3 55 24 V	25	9 42 10 V	10	6 0 15 V	10	0 34 14 V I
6	10 24 21 M	27	4 11. 3 V	14	7 17 44 M	10	2 41 26 V E
8	4 53 16 M	29	10 39.50 M	17	8 35 10 V	17	4 33 46 V I
9	11 22 14 V			21	9 52 32 M	17	6 41 38 V E
11	5 51 9 V			24	11* 9 50 V	24	8 34 0 V I
13	0 20 5 V			28	0 27 3 V	24	10* 42 33 V E
15	6 48 58 M						
17	1* 17 55 M						
18	7 46 49 V						
20	2 15 42 V						

IV. Sat. ♂	
12	11 11 54 M
29	5 12 10 M

Phasis annuli Saturni in Oppositione die 2. Aprilis.




Aprilis
Dies
Situs Satellitum ♃ sub. astr. hor. 1 mane.
Dies
Situs Satellitum ♃ pro temp. Eclips. Vienn. vis.
Imm. I.
Imm. II.
Imm. I.
Imm. I.
Imm. II.

MAJUS. ☉

Dies Astronom.	Dies Mensis Civil.	Dies Hebdomadæ.	MAJUS.	Tempus medium Meridiei veri ☉ H. M. S.	D.	Decrementum diurnum temporis med. S.	D.	Distantia ☉ ♈ Meridiano. H. M.	S.	D.	Acceleratio diurna Stellarum fixarum præ motu ☉ vero. M.	S.	D.
121	1	Merc.	SS. Phil. & Jac.	23.56.56	7	7	5	21 27	22	3	3	49	1
122	2	Jov.	S. Athanasius	23.56.49	2	6.	9	21 23	33	2	3	49	5
123	3	Ven.	Inv. S. Cruc.	23.56.42	3	6.	4	21 19	43	7	3	50	1
124	4	Sab.	S. Florianus.	23.56.35	9	6.	0	21 15	53	6	3	50	6
125	5	*F. Dom.*	3. S. Pius V.	23.56.29	9	5.	4	21.12	3	0	3	51	1
126	6	Lun.	S. Joan. a. P.	23.56.24	5	4.	8	21. 8	11	9	3	51	7
127	7	Mart.	S. Stanisl. Ep.	23.56.19	7	4.	2	21. 4	20	2	3	52	2
128	8	Merc.	Ap. S. Mich.	23.56.15	5	3.	8	21. 0	28	0	3	52	7
129	9	Jov.	S. Gregorius.	23.56.11	7	3.	3	20 56	35	3	3	53	4
130	10	Ven.	S. Antoninus	23.56. 8	4	2.	8	20 52	41	9	3	54	0
131	11	Sab.	S. Mamertus.	23.56. 5	6	2.	1	20.48	47	9	3	54	6
132	12	*F. Dom.*	4. S. Pancrat.	23.56. 3	5	1.	5	20 44	53	3	3	55	1
133	13	Lun.	S. Servatius.	23.56. 2	0	0.	8	20 40	58	2	3	55	5
134	14	Mart.	S. Bonifacius.	23.56. 1	2	0.	3	20.37	2	7	3	56	1
135	15	Merc.	S. Isidorus.	23.56. 0	9	0.	2	20.33	6	6	3	56	8
136	16	Jov.	S. Joan. Nep.	23.56. 1	1	0.	8	20 29	9	8	3	57	4
137	17	Ven.	S. Ubaldus.	23.56. 1	9	1.	4	20.25	12	4	3	58	0
138	18	Sab.	S. Venantius.	23.56. 3	3	2.	1	20.21	14	4	3	58	5
139	19	*F. Dom.*	5. *Rog.* S. Ivo.	23.56. 5	4	2.	6	20.17	15	9	3	59	2
140	20	Lun.	S. Bernardin.	23.56. 8	0	3.	1	20 13	16	7	3	59	6
141	21	Mart.	S. Secundin.	23.56.11	1	3.	6	20. 9	17	1	4	0	3
142	22	Merc.	S. Julia V. M.	23.56.14	7	4.	2	20. 5	16	8	4	0	9
143	23	*Jov.*	*Asc. D. N. J. C.*	23.56.18	9	4.	9	20. 1	15	9	4	1	4
144	24	Ven.	S. Joanna.	23.56.23	8	5.	5	19.57	14	5	4	2	0
145	25	Sab.	S. Urbanus.	23.56.29	3	6.	0	19 53	12	5	4	2	4
146	26	*F. Dom.*	6. S. Phil. Ner.	23.56.35	3	6.	4	19 49	10	1	4	2	9
147	27	Lun.	S. Magdal. P.	23.56.41	7	6.	8	19 45	7	2	4	3	4
148	28	Mart.	S. Germanus	23.56.48	5	7.	2	19.41	3	8	4	3	9
149	29	Merc.	S. Maximus.	23.56.55	7	7.	7	19.36	59	9	4	4	3
150	30	Jov.	S. Felix M.	23.57. 3	4	8.	3	19.32	55	6	4	4	8
151	31	Ven.	S. Petronilla	23.57.11	7			19.28	50	8			

MAJUS. ☉

Solis in meridiano versantis.

Dies Mensis.	Longitudo vera. ♉ G. M. S.	Motus horarius verus. M. S.	Afcenfio recta. G. M. S.	Afcenfio recta conversa H. M. S. D.	Declinatio vera Borealis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	10. 34. 55	2. 25. 3	38. 9.25	2 32.37. 7	15. 0 49	56. 48 13
2	11. 33. 4	2. 25. 2	39. 6.41	2.36.26. 8	15.18 54	57. 6 18
3	12. 31. 10	2. 25. 2	40. 4. 4	2.40.16. 3	15.36.43	57. 24 7
4	13. 29. 15	2. 25. 1	41. 1.36	2.44. 6. 4	15.54.18	57. 41 42
5	14. 27. 18	2. 25. 0	41.59.15	2.47.57. 0	16 11.37	57. 59 1
6	15. 25. 13	2. 24. 9	42.57 1	2 51.48. 1	16.28.39	58. 16 3
7	16. 23. 16	2. 24. 9	43.54.56	2.55.39. 8	16.45.25	58. 32 49
8	17. 21. 12	2. 24. 8	44.52.59	2.59.32. 0	17. 1.53	58. 49 17
9	18. 19. 7	2. 24. 7	45.51.10	3. 3.24. 7	17.18. 6	59. 5 30
10	19. 17. 2	2. 24. 7	46.49.31	3. 7.18. 1	17 34. 0	59. 21 24
11	20. 14. 55	2. 24. 6	47.48. 1	3.11.12. 1	17.49.38	59. 37 2
12	21. 12. 45	2. 24. 5	48.46.40	3.15. 6. 7	18. 4.58	60. 52 22
13	22. 10. 33	2. 24. 5	49.45.26	3.19. 1. 8	18 19 59	60. 7 23
14	23. 8. 19	2. 24. 4	50.44.18	3.22.57. 3	18 34 41	60. 22 5
15	24. 6. 4	2. 24. 4	51 43 20	3.26 53. 4	18 49. 6	60. 36 30
16	25. 3. 49	2. 24. 3	52.42.32	3 30 50 2	19 3.12	60. 50 36
17	26. 1. 32	2. 24. 3	53.41.53	3.34.47. 6	19 16.58	61. 4 22
18	26. 59. 14	2. 24. 2	54.41.23	3.38.45. 6	19.30.24	61. 17 48
19	27. 56. 56	2. 24. 2	55.41. 2	3 42 44. 1	19.43.30	61. 30 54
20	28. 54. 36	2. 24. 1	56.40.49	3.46.43. 3	19 56.17	61. 43 41
21	29. 52. 15	2. 24. 1	57.40.34	3.50.42. 9	20. 8.44	61. 56 [illegible]
22	0. ♊ 49. 54	2. 24. 0	58.40.48	3.54.43. 2	20.20 51	62. 8 1[illegible]
23	1. 47. 32	2. 24. 0	59.41. 1	3.58.44. 1	20 32.37	62. 20 [illegible]
24	2. 45. 9	2. 23. 9	60.41.22	4 2.45 5	20.44. 0	62. 31 2[illegible]
25	3. 42. 45	2. 23. 9	61.41.52	4. 6 47. 5	20.55 4	62. 42 2[illegible]
26	4. 40. 20	2. 23. 8	62 42.29	4.10 49. 9	21 5.45	62. 53 [illegible]
27	5. 37. 44	2. 23. 8	63.43.11	4.14.52. 8	21.16. 4	63. 3 [illegible]
28	6. 35. 26	2. 23. 7	64.44. 2	4.18.56. 2	21.26 3	63. 13 [illegible]
29	7. 32. 57	2. 23. 7	65.45. 0	4.23. 0. 1	21.35.38	63. 23 [illegible]
30	8. 30. 28	2. 23. 6	66.46. 5	4.27. 4. 4	21.44 51	63. 32 [illegible]
31	9. 27. 58	2. 23. 6	67.47.17	4.31. 9 2	21.53.42	63. 41 [illegible]

MAJUS. ☉

Dies Mensis	Solis in Meridiano versantis: Diameter ☉ apparens. M.	S.	D.	Mora transitus disci ☉ per meridianum M.	S.	D.	Distantia ☉ a ♁ cujus distant. med. 10000.	Ortus Centri ☉ verus. H.	M.	Occasus centri ☉ verus. H.	M.
1	31	49	2	2	11	8	10084	16	49	7	11
2	31	48	7	2	12	0	10086	16	48	7	12
3	31	48	3	2	12	1	10089	16	47	7	13
4	31	47	8	2	12	3	10091	16	46	7	14
5	31	47	4	2	12	5	10094	16	44	7	16
6	31	46	9	2	12	7	10096	16	43	7	17
7	31	46	5	2	12	8	10099	16	41	7	19
8	31	46	0	2	13	0	10101	16	39	7	21
9	31	45	6	2	13	1	10104	16	37	7	23
10	31	45	2	2	13	3	10106	16	35	7	25
11	31	44	8	2	13	4	10108	16	34	7	26
12	31	44	4	2	13	6	10110	16	33	7	27
13	31	44	0	2	13	7	10113	16	32	7	28
14	31	43	6	2	13	9	10115	16	31	7	29
15	31	43	2	2	14	0	10117	16	30	7	30
16	31	42	9	2	14	2	10119	16	29	7	31
17	31	42	5	2	14	3	10121	16	28	7	32
18	31	42	1	2	14	5	10123	16	26	7	34
19	31	41	8	2	14	7	10125	16	25	7	35
20	31	41	4	2	14	8	10127	16	24	7	36
21	31	41	1	2	15	0	10128	16	23	7	37
22	31	40	8	2	15	1	10130	16	21	7	39
23	31	40	5	2	15	3	10132	16	20	7	40
24	31	40	1	2	15	4	10133	16	19	7	41
25	31	39	8	2	15	6	10135	16	18	7	42
26	31	39	5	2	15	7	10137	16	17	7	43
27	31	39	2	2	15	9	10139	16	16	7	44
28	31	38	9	2	16	0	10141	16	15	7	45
29	31	38	6	2	16	1	10142	16	15	7	45
30	31	38	3	2	16	3	10144	16	14	7	46
31	31	38	0	2	16	4	10145	16	13	7	47

Dies Mensis	Phænomena & Observationes ☉
2	☉ in parall. β ♌ c. h. 8. m. 57.
4	☉ in parall. γ Serp. c. h. 12. m. 57.
5	☉ in nodo asc. ☿
7	☉ in nodo asc. ♂
10	☉ in parall. η ♌ c. h. 6. m. 44.
16	☉ in parall. η Boot. culm. h 10. m. 9.
21	Ingressus ☉ in 0 ♊ h. 3. m. 14.
	☉ in parall. Arctur culm. h. 10. m. 14.
23	☉ in parall. γ ♌ culm. h. 6. m. 5.
28	☉ in parall. δ ♌ c. h. 6. m. 39.
30	☉ in parall. β Herc. culm. h. 11. m. 48.

MAJUS. ☽

Loca Lunæ, Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M.	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens G.	M.	Diameter ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M.
					B			B										
1	♊	9	48	51	3	11	37	25	6	16	20 ♑	9	33	4	60	36	2	4
2		24	37	53	2	4	47	25	25	55	20	6	32	57	60	22	3	7
3	♋	9	14	7	0	50	2	23	58	30	20	3	32	44	59	58	4	9
					A													
4		23	33	49	0	24	45	20	51	20	20	0	32	32	59	34	5	8
5	♌	7	34	45	1	38	50	16	48	8	19	57	32	5	58	45	6	3
6		21	17	32	2	44	37	11	49	7	19	54	31	43	58	5	6	53
7	♍	4	42	44	3	39	51	6	22	48	19	50	31	21	57	25	7	39
8		17	52	14	4	22	7	0	46	36	19	47	31	2	56	48	8	24
								A										
9	♎	0	47	35	4	50	14	4	45	4	19	44	30	42	56	12	9	8
10		13	30	19	5	3	22	10	0	22	19	41	30	24	55	40	9	52
11		26	1	30	5	1	45	14	44	21	19	38	30	9	55	13	10	38
12	♏	8	22	7	4	45	55	18	48	51	19	35	29	57	54	50	11	25
13		20	33	3	4	17	9	22	2	1	19	31	29	46	54	31	12	13
14	♐	2	35	43	3	37	24	24	15	11	19	28	29	37	54	15	13	3
15		14	30	4	2	47	55	25	20	35	19	25	29	32	54	5	13	53
16		26	21	10	1	51	31	25	16	14	19	22	29	29	54	0	14	43
17	♑	8	8	37	0	50	24	24	3	9	19	19	29	32	54	4	15	31
					B													
18		19	56	55	0	13	7	21	45	52	19	16	29	37	54	14	16	18
19	♒	1	50	7	1	16	43	18	31	32	19	12	29	52	54	42	17	3
20		13	52	43	2	18	45	14	27	47	19	9	30	2	55	0	17	47
21		26	9	46	3	13	39	9	46	18	19	6	30	22	55	37	18	31
22	♓	8	46	6	4	1	47	4	33	24	19	3	30	48	56	23	19	16
								B										
23		21	46	22	4	39	10	1	0	32	19	0	31	15	57	15	20	2
24	♈	5	13	35	5	2	38	6	42	16	18	57	31	46	58	11	20	50
25		19	9	27	5	9	34	12	17	33	18	53	32	16	59	6	21	42
26	♉	3	33	7	5	2	23	17	26	46	18	50	32	43	59	56	22	40
27		18	20	19	4	25	25	21	33	2	18	47	33	5	60	37	23	42
28	♊	3	23	45	3	34	32	24	21	48	18	44	33	19	61	2	☌	
29		18	34	3	2	28	50	25	26	36	18	41	33	25	61	12	0	48
30	♋	3	41	7	1	12	18	24	37	1	18	38	33	18	61	0	1	53
					A													
31		18	36	4	0	8	56	22	1	27	18	35	33	3	60	32	2	56

MAJUS. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longitudo vera. ☽	Latitudo vera. ☽	Diameter ☽ horizontalis.	Parallaxis. ☽ horizontalis.
	S. G. M. S.	G. M. S.	M. S.	M. S.
		B		
1	♊ 17.14 51	2 39 32	33. 3	60.32
2	♋ 1.57.49	1 28 8	32.52	60.12
3	16.26. 8	0 12 19	32.36	59 42
		A		
4	♌ 0.36.40	1 2 56	32.16	59. 5
5	14.28.21	2 12 51	31.54	58.25
6	28. 2.14	3 13 42	31.32	57.44
7	♍ 11.19.21	4 2 41	31.10	57. 6
8	24.21.37	4 38 4	30.52	56.29
9	♎ 7.10.28	4 58 42	30.32	55.55
10	19.47 16	5 4 26	30.16	55.26
11	♏ 2 13. 9	4 55 34	30. 2	55. 1
12	14 28.41	4 33 3	29 51	54.40
13	26 35.25	3 58 27	29 41	54 22
14	♐ 8 34. 8	3 13 36	29.35	54. 9
15	20 26.37	2 20 25	29.30	54. 2
16	♑ 2.15. 2	1 21 24	29 29	54. 1
17	14. 2.25	0 18 48	29.33	54. 7
		B		
18	25.52.44	0 45 3	29.40	54.21
19	♒ 7.49.55	1 47 41	29.54	54.44
20	19.59 8	2 46 32	30 11	55.17
21	♓ 2.25.13	3 38 53	30.34	55.58
22	15 13. 0	4 22 0	31. 2	56.48
23	28.26.32	4 52 50	31 31	57.43
24	♈ 12. 7 50	5 8 21	32. 2	58.39
25	26.17.59	5 5 58	32.31	59.33
26	♉ 10.54. 9	4 43 54	32 56	60.20
27	25 50 30	4 2 14	33.15	60 54
28	♊ 10.58.42	3 3 9	33.24	61.11
29	26. 8.37	1 51 54	33.24	61. 9
30	♋ 11.10.38	0 31 35	33.13	60.49
		A		
31	25.56.49	0 48 52	32.52	60.13

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem.	Distantia centri vera in latitudin.
		H. M.	G. M.
3	δ ♊ 3	10 57	0 28 B
4	ζ ♋ 5	8 35	1 24 B
6	π ♌ 4	9 26	0 47 B
16	λ ♐ 4	14 46	0 51 B
20	λ ♑ 5	16 31	1 0 B

MAJUS.

Dies Menfis.	Aetas ☾	Phænomena & Obfervationes. ☽
1	3	☽ ad β ε ζ ♉
2	4	☽ Perigæa et ad η μ ν ♊
3	5	Lunift. bor. et ad ζ δ κ ♊
4	6	☽ in nodo defc. et ad μ ζ λ ϑ η ♋
5	7	☽ ad δ ο α χ ♋
6	8	☽ ad ν π η α ♌
7	9	☽ ad c χ σ ♌
8	10	☽ in Aequatore et ad β η ♍
9	11	☽ ad χ γ ♍
10	12	☽ ad ϑ α ♍
11	13	☽ ad κ λ ♍
12	14	☽ ad μ α ν ζ ♎
13	15	☽ ad γ κ η λ ϑ ♎
14	16	☽ ad ν σ α τ ♏
15	17	Lunift. auftrale et ad ϑ ρ Oph.
16	18	☽ Apogæa et ad γ μ δ ♐
17	19	☽ ad ο τ π χ ♐
18	20	☽ in nodo afc. et ad σ β ♑
19	21	☽ ad η ϑ τ χ ♑
20	22	☽ ad ζ ε γ λ δ ♑
21	23	☽ ad ϑ ρ σ κ ♒
22	24	☽ ad χ κ ♓
23	25	☽ in Aequatore et ad λ ♓
24	26	☽ ad δ ε ♓
25	27	☽ ad μ η π ♓
26	28	☽ ad μ ο π ♈
27	29	☽ ad Plejad. η ♉
28	1	Lunift. bor. et ad γ δ ϑ ε α ♉
29	2	☽ Perigæa et ad β ε ζ ♉
30	3	☽ ad η μ ν γ ε ♊
31	4	☽ in nodo defc. et ad ω μ ζ ♋

Dies Menfis.	Phænomena & Obfervationes Planetarum.
4	♂ in Quadratura cum fole.
11	♀ in diftantia media a fole.
16	☿ in nodo fuo defcendente.
18	♃ ad υ ♏ h. 23. dift. cent. ♃ 41 m. auftr.
19	Conjunctio ☿ et ⊙ inf.
22	Oppofitio ♃ et ⊙
25	♃ ad ε ω ♏ h. 3. dift. centr. ♃ 53 m. bor.
25	☿ in Aphelio.
27	Conjunctio ♀ et ⊙ fuperior.
	♃ ad 1 ω ♏ h. 16. dift. cent. ♃ 43 m. bor.
30	♃ ad β ♏ h. 7. dift. centr. ♃ 5 m. auftr.

	Phafes Lunæ.
5	Primus Quadrans h. 12. m. 53. in ♌ gr. 14. m. 58.
13	Plenilunium h. 3. m. 30 in ♏ gr. 22. m. 19.
21	Ultimus Quadrans h. 7. m. 43. in ♓ gr. 0 m. 11.
28	Novilunium h. 5 m. 24. in ♊ gr. 6. m. 49.

Planetæ in parallelis fixarum.

♅ menfe toto β ♒
♄ menfe toto ε Orion. α ♒
♃ menfe toto λ ♎ 54 Eridan.
♂ 1. η Boot. 7. γ ♈. 13. 1 δ ♉. 19. β γ Serp. 25. γ ♉ α Delphin.
♀ in radiis folaribus.
☿ 1. η ♊ 7. μ ♊. 13. ζ ♉. 19. δ ♋.

MAJUS.

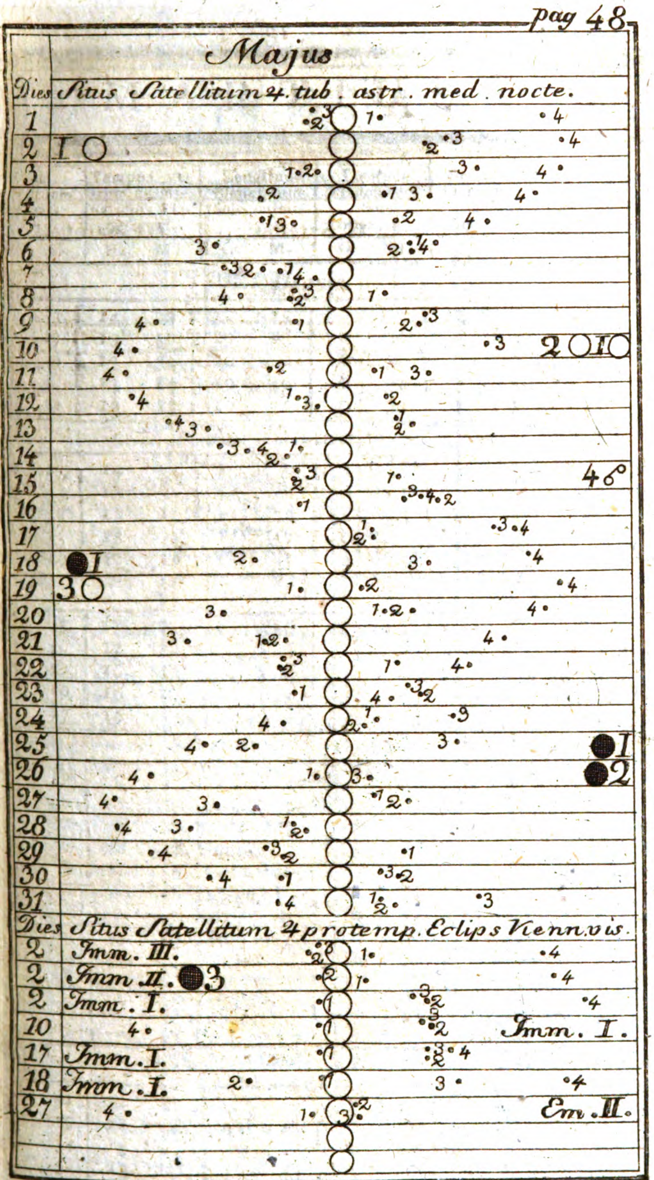
Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	5	0	10	33	18 ♎	0	0 B	39	6 A	28	16	6
7	4	36	10	9	17	48	0	39	6	23	15	42
13	4	11	9	45	17	36	0	39	6	19	15	19
19	3	47	9	21	17	23	0	39	6	15	14	55
25	3	21	8	56	17	10	0	39	6	11	14	31
					♄ *Saturnus.*							
1	4	15	10	10	10 ♎	48	2 B	43	1 A	48	16	5
7	3	50	9	45	10	28	2	43	1	41	15	40
13	3	25	9	21	10	10	2	42	1	35	15	17
19	3	0	8	56	9	54	2	41	1	29	14	52
25	2	35	8	32	9	40	2	40	1	24	14	29
					♃ *Jupiter.*							
1	9	11	13	38	4 ♐	2	1 B	0	20 A	1	18	5
7	8	44	13	12	3	21	1	0	19	53	17	40
13	8	16	12	45	2	38	0	59	19	45	17	14
19	7	47	12	17	1	54	0	59	19	36	16	47
25	7	18	11	48	1	7	0	58	19	27	16	18
					♂ *Mars.*							
1	22	51	6	26	12 ♌	6	2 B	2	19 B	7	14	1
7	22	44	6	14	14	38	1	53	18	15	13	44
13	22	36	6	1	17	18	1	45	17	19	13	26
19	22	29	5	48	20	4	1	37	16	19	13	7
25	22	12	5	25	22	57	1	30	15	16	12	48
					♀ *Venus.*							
1	16	39	23	34	3 ♉	34	1 A	8	11 B	39	6	29
7	16	33	23	40	10	57	0	58	14	13	6	47
13	16	26	23	46	18	20	0	46	16	34	7	6
19	16	22	23	52	25	43	0	34	18	40	7	22
25	16	17	23	58	3 ♊	6	0	20	20	28	7	39
					☿ *Mercurius.*							
1	17	22	1	18	0 ♊	17	2 B	38	22 B	48	9	14
7	17	9	1	3	2	18	1	55	22	32	8	57
13	16	52	0	38	1	23	0	35	21	0	8	24
19	16	28	0	1	28 ♉	22	1 A	10	18	40	7	34
25	16	7	23	27	25	12	2	44	16	26	6	47

MAJUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Immersiones. H. M. S.	D. Mensis.	Emersiones. H. M. S.	D. Mensis.	Immersiones. H. M. S.	D. Mensis.	H. M. S.
1	5 8 33 M	24	7 28 59 M	2	1* 44 7 M	2	0* 32 37 M I
2	11* 37 15 V	26	1 57 29 M	5	3 1 11 V	2	2* 42 26 M E
4	6 5 58 V	27	8 25.55 V	9	4 18 9 M	9	4 32 5 M I
6	0 34 39 V	29	2 54.22 V	12	5 35 0 V	9	6 42 14 M E
8	7 3 21 M	31	9 22.45 M	16	6 51 46 M	16	8 30 6 M I
10	1* 32 1 M			19	8 8 27 V	16	10 41 1 M E
11	8 0 39 V				Emersiones	23	0 17 42 V I
13	2 29 16 V			23	11 42 11 M	23	2 39 21 V E
15	8 57 52 M			27	0* 58 58 M	30	4 25 18 V I
17	3* 26 26 M			30	2 15 19 V	30	6 37 41 V E
18	9* 55 0 V						
20	4 23 32 V						
22	10 52 5 M						

IV. Sat.	
15	11 11 1 V


Majus
Dies Situs Satellitum ♃ tub. astr. med. nocte.
Dies Situs Satellitum ♃ pro temp. Eclips Vienn. vis.
Imm. III.
Imm. II.
Imm. I.
Imm. I.
Imm. I.
Imm. I.
Em. II.

JUNIUS.

Dies Astronomicus	Dies mensis civilis	Dies Hebdomadæ	JUNIUS.	Tempus medium Meridiei veri ⊙ H. M.	S. D.	Incrementum diurnum temporis medii S. D.	Distantia ⊙ a Meridiano H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ⊙ vero M. S. D.
152	1	Sabb.	S. Juventius. †	23.57	[illegible]	[illegible]	19 24 45 6	4 5 6
153	2	*F. Dom.*	*Pentecoste.*	23.57	29. 4	9 4	19 20 40 0	4 5 9
154	3	*Lun.*	*Fer. II. Pentec.*	23.57	38. 8	9 6	19 16 34 1	4 6 2
155	4	Mart.	S. Quirinus.	23.57	48. 4	9 9	19 12 27 9	4 6 5
156	5	Merc.	Quat. Temp. †	23.57	58. 3	10 2	19 8 21 4	4 6 9
157	6	Jov.	S. Norbert.	23.58	8. 5	10 6	19 4 14 5	4 7 2
158	7	Ven.	S. Lycarion. †	23.58	19. 1	10 9	19 0 7 3	4 7 5
159	8	Sabb.	S. Medardus. †	23.58	30. 0	11 3	18 55 59 8	4 7 8
160	9	*F. Dom.*	1. *SS. Trinit.*	23.58	41. 3	11 5	18 51 52 0	4 8 2
161	10	Lun.	S. Margar.	23.58	52. 8	11 7	18 47 43 8	4 8 3
162	11	Mart.	S. Barnabas.	23.59	4. 5	11 9	18 43 35 5	4 8 5
163	12	Merc.	S. Joan. Fac.	23.59	16. 4	12 1	18 39 27 0	4 8 6
164	13	*Jov.*	*Fest. SS. Corp. C.*	23.59	28. 5	12 3	18 35 18 [illegible]	4 8 9
165	14	Ven.	S. Basilius.	23.59	40. 8	12 5	18 31 9 5	4 9 1
166	15	Sabb.	S. Vitus M.	23.59	53. 3	12 6	18 27 0 4	4 9 2
167	16	*F. Dom.*	2. S. Fr. Reg.	0. 0	5. 9	12 7	18 22 51 [illegible]	4 9 3
168	17	Lun.	S. Benno.	0. 0	18. 6	12 8	18 18 41 [illegible]	4 9 5
169	18	Mart.	S. Leontius.	0. 0	31. 4	13 0	18 14 32 [illegible]	4 9 5
170	19	Merc.	S. Juliana F.	0. 0	44. 4	13 0	18 10 22 9	4 9 6
171	20	Jov.	S. Silverius.	0. 0	57. 4	13 0	18 6 13 3	4 9 5
172	21	Ven.	S. Aloys. G.	0. 1	10. 4	12 9	18 2 3 8	4 9 6
173	22	Sabb.	S. Paulinus.	0. 1	23. 3	12 9	17 57 54 [illegible]	4 9 5
174	23	*F. Dom.*	3. S. Zeno.	0. 1	36. [illegible]	13 0	17 53 44 7	4 9 5
175	24	Lun.	Nat. S. J. B.	0. 1	49. [illegible]	12 9	17 49 35 [illegible]	4 9 4
176	25	Mart.	S. Prosper Ep.	0. 2	2. 1	12 8	17 45 25 8	4 9 3
177	26	Merc.	SS. Jo. & Paul.	0. 2	14. [illegible]	12 6	17 41 16 5	4 9 3
178	27	Jov.	S. Ladislaus.	0. 2	27. [illegible]	12 4	17 37 7 2	4 9 0
179	28	Ven.	S. Leo.	0. 2	39. [illegible]	12 3	17 32 58 [illegible]	4 9 0
180	29	*Sabb.*	*SS. Petri & Paul.*	0. 2	51. [illegible]	12 1	17 28 49 2	4 8 8
181	30	*F. Dom.*	4. Com. S. Pauli	0. 3	4. 3		17 24 40 4	

JUNIUS. ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♊ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa. H. M. S. D.	Declinatio vera Borealis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	10. 25. 28	2. 23. 6	68 48 36	4.35.14. 4	22 2 10	63 49.34
2	11. 22. 55	2. 23. 6	69 50 0	4.39.20. 0	22 10 15	63 57 39
3	12. 20. 20	2. 23. 5	70 51 29	4 43.25. 9	22 17 56	64. 5.20
4	13 17. 44	2. 23. 5	71 53 2	4.47.32. 1	22 25 14	64 12.38
5	14. 15. 7	2. 23. 4	72 54 40	4.51.38. 6	22 32 9	64.19.33
6	15. 12. 28	2. 23. 4	73 56 23	4 55 45. 5	22 38 39	64.26. 3
7	16. 9. 48	2. 23. 4	74 58 11	4.59 52. 7	22 44 46	64.32.10
8	17. 6. 48	2. 23. 3	76 0 3	5. 4. 0. 2	22 50 29	64.37.53
9	18. 4. 28	2. 23. 3	77 2 1	5. 8. 8. 0	22 55 49	64.43 13
10	19. 1. 47	2. 23 3	78 4 3	5 12.16. 2	23 0 43	64 48. 7
11	19. 59. 4	2. 23. 2	79 6 7	5 16.24. 5	23 5 13	64.52.37
12	20. 56. 20	2. 23. 2	80 8 14	5.20.33. 0	23 9 21	64.56.45
13	21. 53. 36	2. 23. 2	81 10 24	5.24.41. 6	23 13 4	65. 0.28
14	22. 50. 53	2. 23. 2	82 12 37	5.28.50. 5	23 16 21	65. 3.45
15	23. 48. 9	2. 23. 2	83 14 53	5.32. 9. 6	23 19 13	65. 6.37
16	24. 45. 24	2. 23. 1	84 17 11	5.37. 8. 8	23 21 42	65. 9. 6
17	25. 42. 39	2. 23. 1	85 19 31	5 41.18. 1	23 23 47	65.11.11
18	26. 39. 54	2. 23. 1	86 21 53	5 45.27. 6	23 25 26	65.12.50
19	27 37. 9	2. 23. 1	87 24 16	5.49.37. 1	23 26 40	65.14. 4
20	28 34. 24	2. 23. [illegible]	88 26 40	5.53.46. 7	23 27 31	65.14.55
21	29. 31. 38	2. 23. 1	89 29 3	5.57.56. 2	23 27 55	65.15.19
22	0. ♋ 28. 53	2. 23. 1	90 31 26	6. 2. 5. 8	23 27 53	65.15 17
23	1. 26. 7	2. 23. 0	91 33 49	6. 6.15. 3	23 27 29	65.14.53
24	2. 23. 21	2. 23. 0	92 36 13	6.10.24. 8	23 26 40	65.14. 4
25	3. 20. 34	2. 23. 0	93 38 34	6.14.34. 2	23 25 25	65.12.49
26	4. 17. 48	2. 23. 0	94 40 54	6.18.43. 5	23 23 45	65.11. 9
27	5. 15. 1	2. 23. 0	95 43 11	6.22.52. 8	23 21 41	65. 9. 5
28	6 12. 14	2. 23. 0	96 45 27	6.27. 1. 8	23 19 12	65. 6.36
29	7. 9. 28	2. 23. 0	97 47 41	6.31.10. 8	23 16 20	65. 3.44
30	8. 6. 43	2. 23. 0	98 49 53	6.35.19. 6	23 13 4	65. 0.28

JUNIUS. ☉

Dies Mensis.	Solis in Meridiano versantis. Diameter ☉ apparens. M. S D.	Mora transitus disci ☉ per Meridianum. M. S. D.	Distantia ☉ a ♁. cujus Distantia media. 10000.	Ortus centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.	Dies Mensis.	Phænomena & Observationes. ☉
1	31 37 7	2 16 5	10146	16 12	7 48		
2	31 37 5	2 16 6	10148	16 11	7 49	4	☉ in nodo asc. ♀
3	31 37 2	2 16 7	10149	16 10	7 50	21	Ingressus ☉ in ♋ h. 11. m. 54.
4	31 37 0	2 16 8	10150	16 10	7 50		
5	31 36 8	2 16 9	10152	16 9	7 51	30	☉ in nodo asc. ♃
6	31 36 5	2 17 0	10153	16 9	7 51		
7	31 36 3	2 17 1	10154	16 8	7 52		
8	31 36 1	2 17 1	10155	16 7	7 53		
9	31 35 9	2 17 2	10156	16 7	7 53		
10	31 35 7	2 17 2	10157	16 6	7 54		
11	31 35 6	2 17 3	10158	16 6	7 54		
12	31 35 4	2 17 3	10159	16 5	7 55		
13	31 35 2	2 17 4	10160	16 5	7 55		
14	31 35 0	2 17 4	10161	16 5	7 55		
15	31 34 9	2 17 5	10162	16 4	7 56		
16	31 34 8	2 17 5	10162	16 4	7 56		
17	31 34 6	2 17 5	10163	16 4	7 56		
18	31 34 5	2 17 6	10164	16 4	7 56		
19	31 34 4	2 17 6	10164	16 4	7 56		
20	31 34 3	2 17 6	10165	15 4	7 56		
21	31 34 2	2 17 6	10165	16 4	7 56		
22	31 34 2	2 17 6	10166	16 4	7 56		
23	31 34 1	2 17 6	10166	16 4	7 56		
24	31 34 0	2 17 6	10167	16 4	7 56		
25	31 33 9	2 17 5	10167	16 4	7 56		
26	31 33 9	2 17 5	10168	16 4	7 56		
27	31 33 9	2 17 5	10168	16 4	7 56		
28	31 33 8	2 17 4	10168	16 5	7 55		
29	31 33 8	2 17 4	10169	16 5	7 55		
30	31 33 8	2 17 3	10169	16 5	7 55		

JUNIUS. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens. G.	M.	Diam. ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M.
						A			B									
1	♌	3	12	11	1	27	33	18	2	33	18 ♑	31	32	41	59	51	3	55
2		17	25	47	2	38	44	13	6	19	18	28	32	15	59	3	4	47
3	♍	1	15	54	3	38	31	7	37	48	18	25	31	47	58	12	5	35
4		14	42	41	4	24	36	1	57	28	18	21	31	19	57	22	6	21
									A									
5		27	48	30	4	55	32	3	38	31	18	18	30	54	56	36	7	5
6	♎	10	35	47	5	10	53	8	57	38	18	15	30	32	55	55	7	49
7		23	7	37	5	10	19	13	47	34	18	11	30	13	55	20	8	33
8	♏	5	26	20	4	56	34	18	0	8	18	8	29	59	54	54	9	19
9		17	34	33	4	28	59	21	23	22	18	5	29	46	54	30	10	7
10		29	34	40	3	49	51	23	49	11	18	2	29	37	54	14	11	56
11	♐	11	28	49	3	0	52	25	10	3	17	59	29	32	54	4	11	45
12		23	18	59	2	4	16	25	22	27	17	56	29	29	53	59	12	35
13	♑	5	7	14	1	2	26	24	24	16	17	52	29	29	53	59	13	24
						B												
14		16	55	40	0	2	13	22	21	16	17	49	29	32	54	5	14	12
15		28	47	6	1	7	11	19	19	42	17	46	29	38	54	17	14	58
16	♒	10	44	23	2	9	50	15	28	37	17	43	29	48	54	36	15	42
17		22	51	6	3	7	31	10	58	35	17	40	30	4	55	3	16	24
18	♓	5	11	7	3	57	38	5	55	58	17	37	30	22	55	37	17	6
19		17	48	10	4	37	31	0	34	1	17	33	30	45	56	18	17	50
									B									
20	♈	0	46	17	5	4	33	4	57	36	17	30	31	10	57	6	18	36
21		14	8	27	5	16	13	10	27	53	17	27	31	49	57	59	19	26
22		27	56	46	5	10	29	15	34	47	17	24	32	9	58	53	20	19
23	♉	12	11	38	4	45	50	20	2	7	17	21	32	38	59	46	21	17
24		26	49	42	4	1	17	23	22	44	17	18	33	2	60	30	22	20
25	♊	11	48	57	3	0	9	25	12	14	17	14	33	18	61	1	23	26
26		26	58	25	1	46	9	25	11	53	17	11	33	26	61	16	☌	
27	♋	12	10	22	0	23	59	23	18	19	17	8	33	25	61	12	0	31
						A												
28		27	14	34	0	59	25	19	45	39	17	5	33	13	60	49	1	32
29	♌	12	2	48	2	17	21	15	0	0	17	2	32	51	60	11	2	29
30		26	28	49	3	24	28	9	29	41	16	59	32	24	59	21	3	22

JUNIUS. ☽

Loca Lunæ media nocte.								
Dies Mensis.	Longit. vera. ☽	Latitudo vera ☽			Diameter ☽ horizontalis.		Parallaxis. ☽ horizontalis	
	S. G. M. S.	G.	M.	S.	M.	S.	M.	S.
		A						
1	♌ 10 21 52	2	4	20	32	29	59	28
2	14 23 51	3	10	15	32	0	58	37
3	♍ 8. 2. 3	4	3	24	31	32	57	46
4	21.18. 7	4	42	1	31	6	56	58
5	♎ 4.14.11	5	5	9	30	43	56	14
6	16.53 35	5	12	50	30	21	55	36
7	29 18.28	5	5	32	30	5	55	5
8	♏ 11 31 37	4	44	18	29	51	54	40
9	23 35 30	4	10	45	29	40	54	21
10	♐ 5.32 20	3	26	27	29	34	54	8
11	17.24 18	2	33	23	29	29	54	0
12	29 13 16	1	33	51	29	27	53	57
13	♑ 11. 1 13	0	30	18	29	29	54	1
		B						
14	22.50 50	0	34	50	29	35	54	10
15	♒ 4.44.47	1	38	56	29	43	54	25
16	16.46 22	2	39	27	29	56	54	48
17	28.59 9	3	33	41	30	12	55	18
18	♓ 11.27 17	4	19	0	30	32	55	56
19	24 14.22	4	52	50	30	57	56	41
20	♈ 7.24.13	5	12	28	31	25	57	32
21	20.59 18	5	15	37	31	54	58	26
22	♉ 5. 0 57	5	0	39	32	24	59	21
23	19 28 19	4	26	7	32	51	60	10
24	♊ 4.17 47	3	32	9	33	13	60	49
25	19 22 43	2	24	44	33	25	61	13
26	♋ 4 34 55	1	5	39	33	28	61	18
		A						
27	19.43 55	0	18	0	33	21	61	5
28	♌ 4.41 13	1	39	26	33	3	60	33
29	19.18.53	2	52	31	32	40	59	48
30	♍ 3.32.15	3	52	50	32	10	58	54

Congress. ☽ cum fixis & Plane					
Dies Mensis.	Nomen & Characteres fixarum & Planetarum.	Tempus verum conjunctionis in longitud.		Distantia centri ☽ vera in latitudinem.	
		H.	M.	G.	M.
4	e ♌ ♃	12	40	0	59 B
10	σ ♏ ♃	11	5	0	30 B
17	ϑ ♒ ♃	15	3	0	57 B

JUNIUS.

Dies Menſ.	Aetas ☽	Phænomena & Obſervationes ☽
1	5	☽ ad ϑ γ η α ♋
2	6	☽ ad ο π η α ♌
3	7	☽ ad ϱ c χ ♌
4	8	☽ in Aequator. et ad σ τ ε υ ♌
5	9	☽ ad η χ ♍
6	10	☽ ad ϑ α ♍
7	11	☽ ad κ λ ♍
8	12	☽ ad α μ ξ ♎
9	13	☽ ad γ κ η ♎ π δ ♏
10	14	☽ ad β ν σ τ ♏
11	15	☽ ad ϛ ϑ Ophiuchi.
12	16	☽ Apogæa et ad γ μ δ λ ♐
13	17	Luniſt. Auſtr. et ad ν σ ο τ π ♐
14	18	☽ in nodo aſc. et ad ϱ ω ♐
15	19	☽ ad β τ η ϑ ♑
16	20	☽ ad ζ ε γ κ ♑
17	21	☽ ad ι ϑ ϱ ♒
18	22	☽ ad σ τ λ ψ ♒
19	23	☽ in Aequator. et ad κ λ ♓
20	24	☽ ad d δ ♓
21	25	☽ ad μ η π ν ♓
22	26	☽ ad ϑ μ ο ♈
23	27	☽ ad π ε δ τ ♈
24	28	☽ ad Plejades et γ χ, δ ε α ♉
25	29	Luniſt. bor. et ad β ο ζ ♉
26	30	☽ Perigæa et ad η μ ν ♊
27	1	☽ in nodo deſc. et ad ζ λ δ κ ♊
28	2	☽ ad ζ λ ϑ η γ δ ♋
29	3	☽ ad κ ξ ♋ ο ν ♌
30	4	☽ ad π η α ϱ ♌

Dies Menſ.	Phænomena & Obſervationes Planetarum.
2	♂ ad ✱ ♌ h. 6. diſt. centr. ♂ 54 m. bor.
	♀ in nodo ſuo aſcend.
13	☿ in digreſſione maxima occ.
14	♀ ad H ♊ h. 10. diſt. centr. ♀ 39 m. bor.
	♂ ad ϱ ♌ h. 16. diſt. centr. ♂ 1 gr. bor.
23	♀ ad ι ♊ h. 3. diſt. centr. ♀ 1 gr. 14 m. auſtr.
	♅ ad λ ♎ h. 14. diſt. centr. ♅ 46 m. bor.
25	♀ ad 1 ω ♊ h. 6. diſt. centr. ♀ 38 m. auſtr.
29	♂ ad χ ♌ h. 10. diſt. centr. ♂ 28 m. auſtr.

Phaſes Lunæ.

3 Primus Quadrans hor. 21. m. 1 . in ♍ gr. 13. m. 11.

11 Plenilunium hor. 18. m. 45. in ♐ gr. 20. m. 44.

19 Ultimus Quadrans. h. 19. m. 38. in ♓ gr. 28. m. 24.

26 Novilunium hor. 12. m. 20. in ♋ gr. 4. m. 47.

Planetæ in parallelis fixarum.

♅ menſe toto ι Orion.
♄ menſe toto ε Orion. α ♒
♅ menſe toto κ ♎ β Ceti.
♂ 1. ζ Delph. γ Pegaſ. 7. d ♌. 13 δ Serp. 19. ϱ ♌ γ Aquil. 25. π ♌ ε Pegaſ.
♀ in radiis ſolaribus.
☿ 1. γ ♉ α Delph. 7. γ Delph. 13. γ β Serp. 19. γ ♈. 25. ζ ♊ γ ♌.

JUNIU[illegible]

H.	M.	H.	M.	G.	M.
♅ Uran[illegible]					
1	51	8	27	17 ♎	3
1	36	8	3	16	58
1	1	7	37	16	54
1	36	7	12	16	51
1	11	6	47	16	49
♄ Satu[illegible]					
1	5	8	3	9 ♎	32
1	40	7	37	9	28
1	17	7	13	9	26
0	52	6	48	9	25
0	28	6	24	9	[illegible]
♃					
6	46	11	16	0 ♐	
6	17	10	48	29 ♏	
5	48	10	20	28	
5	20	9	53	28	
4	52	9	26	27	
22	14	5	21	26	
22	6	5	8	25	
21	58	4	55		
21	52	4	43		
21	46	4	30		
16	15	0	6		
16	15	0	13		
16	18	0	20		
16	24	0	27		
16	33	0	35		
15	41	22	53		
15	21	22	3[illegible]		
15	6	22	2[illegible]		
14	58	22	[illegible]		
14	54	22	[illegible]		

JUNIUS.

Dies Mensis.	Ortus Planetarum apparens.		Tempus verum culminationis planetarum.		Longitudo planetarum. Sole culminante.		Latitudo Planetarum Sole culminante.		Declinatio Planetarum Sole culminante.		Occasus Planetarum apparens.	
	H.	M.	H.	M.	G.	M.	G.	M.	G.	M.	H	M.
♅ *Uranie.*												
1	2	51	8	27	17 ♎	3	0 B	38	6 A	7	14	3
7	2	36	8	2	16	58	0	38	6	5	13	28
13	2	1	7	37	16	54	0	38	6	4	13	13
19	1	36	7	12	16	51	0	38	6	3	12	48
25	1	11	6	47	16	49	0	38	6	2	12	23
♄ *Saturnus.*												
1	2	5	8	2	9 ♎	32	2 B	37	1 A	22	13	59
7	1	40	7	37	9	28	2	36	1	21	13	34
13	1	17	7	13	9	26	2	35	1	22	13	9
19	0	52	6	48	9	25	2	34	1	25	12	44
25	0	28	6	24	9	31	2	32	1	28	12	20
♃ *Jupiter.*												
1	6	46	11	16	0 ♐	16	0 B	57	19 A	19	15	46
7	6	17	10	48	29 ♏	33	0	56	19	10	15	19
13	5	48	10	20	28	53	0	55	19	2	14	52
19	5	20	9	53	28	16	0	54	18	55	14	26
25	4	52	9	26	27	43	0	53	18	49	14	0
♂ *Mars.*												
1	22	14	5	21	26 ♌	30	1 B	23	13 B	59	12	28
7	22	6	5	8	29	35	1	17	12	48	12	10
13	21	58	4	55	2 ♍	46	1	10	11	34	11	52
19	21	52	4	43	6	2	1	4	10	17	11	34
25	21	46	4	30	9	22	0	58	8	58	11	14
♀ *Venus.*												
1	16	15	0	6	11 ♊	42	0 A	3	22 B	9	7	57
7	16	15	0	13	19	5	0 B	11	23	13	8	11
13	16	18	0	20	26	27	0	25	23	51	8	22
19	16	24	0	27	3 ♋	49	0	39	24	4	8	30
25	16	33	0	35	11	11	0	51	23	52	8	37
☿ *Mercurius.*												
1	15	41	22	53	23 ♉	36	3 A	50	15 B	0	6	5
7	15	21	22	34	25	2	4	0	15	10	5	47
13	15	6	22	26	29	3	3	36	16	27	5	46
19	14	58	22	28	5 ♊	25	2	48	18	28	5	58
25	14	54	22	36	13	55	1	43	20	48	6	18

JUNIUS.

Eclipses Satellitum Jovis.

I. Satelles.

D. Menf.	Emerfiones. H. M. S.
2	3 51 12 M
3	10* 19 32 V
5	4 47 56 V
7	11 16 30 M
9	5 44 42 M
11	0* 13 1 M
12	6 41 22 V
14	1 9 43 V
16	7 38 7 M
18	2 6 27 M
19	8 34 46 V

D. Menf.	Emerfiones. H. M. S.
21	3 3. 4 V
23	9 31.27 M
25	3 59.45 M
26	10* 28. 8 V
28	4 56.30 V
30	11 25. 0 M

II. Satelles.

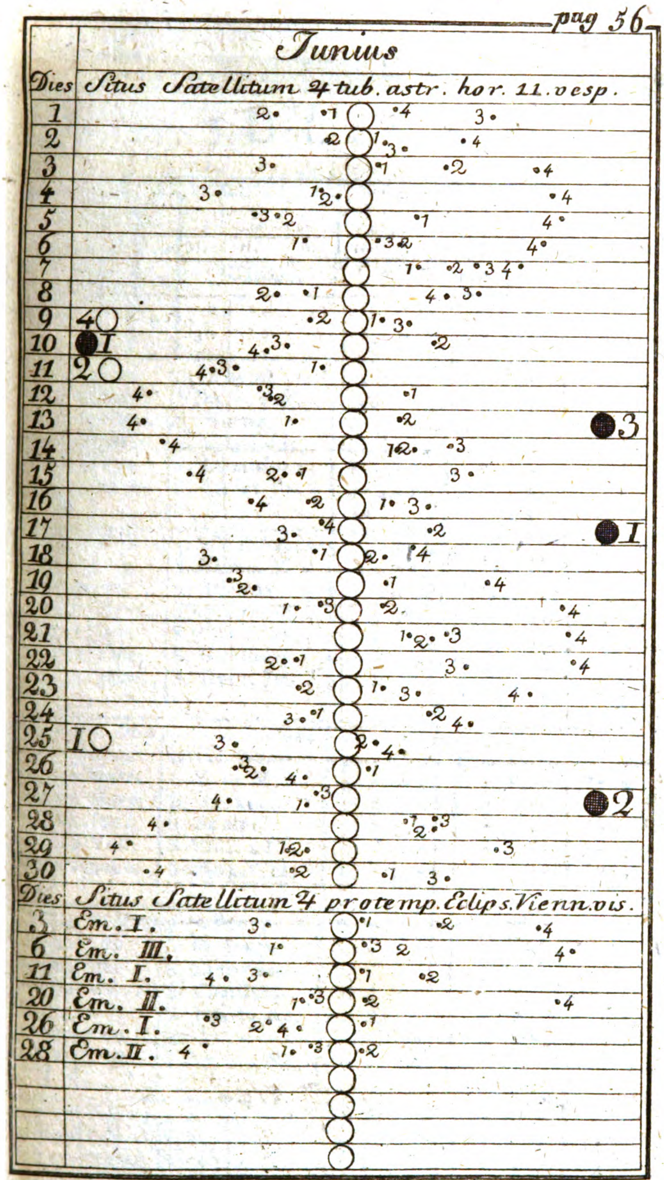
D. Menf.	Emerfiones. H. M. S.
3	3 31 52 M
6	4 48 23 V
10	6 4 53 M
13	7 21 22 V
17	8 37 55 M
20	9* 54 27 V
24	11 10 58 M
28	0* 27 41 M

III. Satelles.

D. Menf.	H. M. S.	
6	8 22 45 V	I
6	10* 35 53 V	E
14	0* 21 46 M	I
14	2 34 49 M	E
21	4 18 8 M	I
21	6 33 0 M	E
27	8 15 52 M	I
27	10 31 35 M	E

IV. Sat. ☌

1	5 8 26 V
18	11 4 29 M


Junius
Dies Situs Satellitum ♃ tub. astr. hor. 11. vesp.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Dies Situs Satellitum ♃ pro temp. Eclips. Vienn. vis.
3 Em. I.
6 Em. III.
11 Em. I.
20 Em. II.
26 Em. I.
28 Em. II.

JULIUS. ☉

Dies Astronom.	Dies Mensis Civil.	Dies Hebdomadæ.	JULIUS.	Tempus medium Meridiei veri ☉ H. M. S. D	Incrementum diurnum temporis med S. D.	Distantia ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna Stellarum fixarum præmotu ☉ vero. M.	S. D.
182	1	Lun.	S. Theodoric.	0. 3.16.2	11. 7	17.20.31.9.	4.	8. 2
183	2	Mart.	Visit. B.V.M.	0. 3.27.9	11. 3	17.16.23.7.	4.	7. 9
184	3	Merc.	S. Eulog.	0. 3.39.2	11. 0	17 12.15.8.	4.	7. 6
185	4	Jov.	S. Udalricus.	0. 3.50.2	10. 7	17. 8. 8.2.	4.	7. 2
186	5	Ven.	S. Domitius.	0. 4. 0.9	10. 4	17. 4. 1.0.	4.	7. 0
187	6	Sabb.	S. Isaias Pr.	0. 4.11.3	10. 1	16.59.54.0.	4.	6. 6
188	7	*F. Dom*	5. S.Wilibaldus	0. 4.21.4	9. 7	16.55.47.4	4.	6. 2
189	8	Lun.	S. Elisab. V.	0. 4.31.1	9. 2	16.51.41.2.	4.	5. 9
190	9	Mart.	S. Brictius.	0. 4.40.3	8. 7	16.47.35.3.	4.	5. 4
191	10	Merc.	SS.7.Frat.M.	0. 4.49.0	8. 4	16.43.29.9.	4.	4. 9
192	11	Jov.	S.Pius P. M.	0. 4.57.4	7. 9	16.39.25.0.	4.	4. 5
193	12	Ven.	S. Gualbert.	0. 5. 5.3	7. 4	16.35.20.5.	4.	4. 0
194	13	Sabb.	S. Henr. Im.	0. 5.12.7	7. 1	16.31.16.5.	4.	3. 6
195	14	*F. Dom*	6 S. Bonavent.	0. 5.19.8	6. 5	16.27.12.9.	4.	3. 1
196	15	Lun.	Divis. Apost.	0. 5.26.3	5. 9	16.23. 9.8.	4.	2. 7
197	16	Mart.	B. V. de M.C.	0. 5.32.4	5. 6	16.19. 7.1.	4.	2. 0
198	17	Merc.	S. Alexius.	0. 5.38.0	5. 1	16.15. 5.1.	4.	1. 6
199	18	Jov.	S. Symphor.	0. 5.43.1	4. 5	16.11. 3.5.	4.	1. 2
200	19	Ven.	S. Vinc. a P.	0. 5.47.6	4. 0	16. 7. 2.3.	4.	0. 6
201	20	Sabb.	S.Marg.V.M.	0. 5.51.6	3. 5	16. 3. 1.7.	4.	0. 1
[illegible]	21	*F. Dom*	7 S. Praxed.	0. 5.55.1	3. 0	15.59. 1.6.	3.	59. 5
203	22	Lun.	S. M. Magd.	0. 5.58.1	2. 4	15.55. 2 1.	3.	59. 0
204	23	Mart.	S. Liborius.	0. 6. 0.5	2. 0	15.51. 3.1.	3.	58. 4
205	24	Merc.	S. Christina.	0. 6. 2.5	1. 4	15.47. 4 7.	3.	58. 0
206	25	Jov.	S. Jacob. Ap.	0. 6. 3.9	0. 7	15 43. 6 7.	3.	57. 4
207	26	Ven.	S. Anna.	0. 6. 4 6	0. 2	15.39. 9.3.	3.	56. 8
208	27	Sabb.	S. Pantal. M.	0. 6. 4.8	0. 4	15.35.12.5.	3.	56. 1
209	28	*F. Dom.*	8 S. Nazar. M.	0. 6. 4.4	1. 1	15.31.16 4.	3.	55. 5
210	29	Lun.	S. Martha V.	0. 6. 3 3	1. 6	15.27.20.9.	3.	55. 0
211	30	Mart.	SS Abd.&Sen.	0. 6. 1.7	2. 8	15.23.25.9.	3.	54. 3
212	31	Merc.	S.Ign. Loy.	0. 5.59.5		15.19.31.6.		

JULIUS. ☉

Solis in meridiano verſantis.

Dies Menſis.	Longitudo vera. ♋ G. M. S.	Motus horarius verus. M. S.	Aſcenſio recta. G. M. S.	Aſcenſio recta converſa H. M. S. D.	Declinatio vera Borealis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	9. 3. 57	2. 23 0	99.52. 1	6 39.28. 1	23. 9.22	64. 56 46
2	10. 1. 10	2. 23. 0	100.54. 4	6.43.36. 3	23. 5 14	64. 52 38
3	10. 58. 22	2. 23. 0	101 56 2	6 47.44. 2	23. 0.43	64 48 7
4	11. 55. 34	2. 23. 0	102 57.56	6 51.51. 8	22 55 49	64. 43 13
5	12. 52. 45	2. 23. 0	103.59.47	6.55.59. 0	22.50.31	64. 37 55
6	13. 49. 57	2. 23. 0	105. 1 29	7. 0. 6. 0	22.44.48	64. 32 12
7	14. 47. 9	2. 23. 0	106. 3. 8	7. 4.12. 6	22.38.42	64. 26 6
8	15. 44. 21	2. 23. 0	107 4.41	7. 8.18. 8	22.32.12	64. 19 36
9	16. 41. 33	2. 23. 1	108 6. 9	7.12.24. 7	22.25 19	64. 12 43
10	17. 38. 34	2. 23. 1	109. 7.30	7 16 30. 1	22.18. 4	64. 5 28
11	18. 35. 56	2. 23. 1	110. 8.43	7 20 35. 0	22.10.25	63. 57 49
12	19. 33. 8	2. 23. 1	111. 9.50	7.24.39. 5	22. 2.23	63. 49 47
13	20. 30. 21	2. 23. 1	112.10.51	7.28.43. 5	21 53.57	63. 41 21
14	21. 27. 33	2. 23. 1	113.11.45	7.32.47. 1	21 45.10	63. 32 34
15	22. 24. 46	2. 23. 1	114 12 32	7.36 50. 2	21.35.59	63. 23 23
16	23. 22. 0	2. 23. 1	115.13 12	7 40 52. 9	21 26.27	63. 13 51
17	24. 19. 13	2. 23. 2	116.13.43	7 44.54. 9	21 16.34	63. 3 58
18	25. 16. 28	2. 23. 2	117.14. 7	7 48 56. 5	21. 6.19	62. 53 43
19	26. 13. 44	2. 23. 2	118.14.24	7 52.57. 7	20.55.43	62. 43 7
20	27. 11. 1	2. 23. 2	119.14 34	7.56 58. 3	20 44.45	62. 32 9
21	28. 8. 18	2. 23. 2	120.14.35	8 0 58. 4	20.33.26	62. 20 50
22	29. 5. 36	2. 23. 2	121.14 28	8. 4.57. 9	20.21 45	62. 9 9
23	0. ♌ 2. 57	2. 23. 3	182.14.32	8. 8.56. 9	20. 9 46	61. 57 10
24	1. 0. 19	2. 23. 3	123.13 49	8.12.55 3	19 57 25	61. 44 49
25	1. 57. 41	2. 23. 3	124 13 19	8.16.53. 3	19.44 44	61. 32 8
26	2. 55. 4	2. 23. 3	125.12.40	8.20.50. 7	19.31.43	61. 19 7
27	3. 52. 26	2. 23. 4	126.11 51	8.24.47. 5	19.18.23	61. 5 47
28	4. 49. 49	2. 23. 4	127.11 50	8.28.43 6	19. 4.44	60. 52 8
29	5. 47. 14	2. 23. 4	128. 9.45	8.32.39. 1	18.50.46	60. 38 10
30	6. 44. 40	2. 23. 5	129. 8.29	8.36 34. 1	18.36.29	60. 23 53
31	7. 42. 6	2. 23. 5	130. 7. 4	8.40 28. 4	18 21.53	60. 9 17

J U L I U S. ☉

Solis in Meridiano versantis													
Dies Mensis.	Diameter ☉ apparens.			Mora transitus disci ☉ per meridianum			Distantia ☉ a ♁ cujus distant. med. 10000.	Ortus Centri ☉ verus.		Occasus centri ☉ verus.			
	M.	S.	D.	M.	S.	D.		H.	M.	H.	M.		
1	31	33	8	2	17	2	10168	16	6	7	54		
2	31	33	8	2	17	1	10168	16	6	7	54		
3	31	33	8	2	17	0	10168	16	7	7	53		
4	31	33	8	2	17	0	10168	16	7	7	53		
5	31	33	9	2	16	9	10167	16	8	7	52		
6	31	33	9	2	16	8	10167	16	8	7	52		
7	31	33	9	2	16	7	10167	16	9	7	51		
8	31	34	0	2	16	6	10167	16	9	7	51		
9	31	34	0	2	16	5	10166	16	10	7	50		
10	31	34	1	2	16	4	10166	16	11	7	49		
11	31	34	2	2	16	3	10165	16	11	7	49		
12	31	34	2	2	16	2	10165	16	12	7	48		
13	31	34	3	2	16	0	10164	16	13	7	47		
14	31	34	4	2	15	9	10163	16	14	7	46		
15	31	34	6	2	15	7	10163	16	15	7	45		
16	31	34	7	2	15	6	10162	16	16	7	44		
17	31	34	8	2	15	4	10162	16	17	7	43		
18	31	34	9	2	15	3	10161	16	18	7	42		
19	31	35	1	2	15	1	10161	16	19	7	41		
20	31	35	3	2	15	0	10160	16	20	7	40		
21	31	35	5	2	14	8	10159	16	21	7	39		
22	31	35	7	2	14	7	10158	16	23	7	37		
23	31	35	9	2	14	5	10157	16	24	7	36		
24	31	36	2	2	14	4	10156	16	25	7	35		
25	31	36	4	2	14	2	10155	16	26	7	34		
26	31	36	6	2	14	1	10154	16	28	7	32		
27	31	36	8	2	13	9	10152	16	29	7	31		
28	31	37	1	2	13	8	10151	16	30	7	30		
29	31	37	3	2	13	6	10150	16	31	7	29		
30	31	37	5	2	13	5	10148	16	32	7	28		
31	31	37	7	2	13	3	10147	16	33	7	27		

Dies Mensis.	Phænomena & Observationes ☉
1	☉ Apogæus.
12	☉ in parall. β Herc. culm. h. 8. m 56.
13	☉ in nodo asc. ♄
21	☉ in parall. Arctur culm. h. 6. m. 6.
22	Ingressus ☉ in 0 ♌ h. 22. m. 46.
25	☉ in parall. η Boot. culm. h. 5. m. 23.

JULIUS. ☽

Loca Lunæ Sole in Meridiano verſante.

Dies Menſis.	Longitudo vera ☽ S.	G.	M.	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ aſcendens G.	M.	Diametet ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M
						A			B									
1	♍	10	29	10	4	17	15	3	40	20	16 ♑	55	31	53	58	25	4	9
									A									
2		24	3	9	4	53	46	2	7	44	16	52	31	23	57	29	4	55
3	♎	7	12	5	5	13	35	7	39	26	16	49	30	54	56	37	5	41
4		19	58	43	5	17	12	12	42	30	16	46	30	29	55	50	6	26
5	♏	2	26	12	5	5	38	17	6	30	16	43	30	8	55	12	7	11
6		14	38	23	4	40	28	20	42	35	16	39	29	52	54	43	7	58
7		26	39	33	4	3	9	23	22	12	16	36	29	40	54	21	8	47
8	♐	8	33	8	3	15	50	24	58	40	16	33	29	32	54	7	9	36
9		20	22	32	2	20	14	25	26	55	16	30	29	29	54	0	10	26
10	♑	2	10	24	1	18	56	24	45	47	16	27	29	29	54	1	11	14
11		14	0	11	0	14	18	22	58	3	16	23	29	31	54	5	12	2
						B												
12		25	53	4	0	51	51	20	8	42	16	20	29	37	54	16	12	49
13	♒	7	51	56	1	55	56	16	27	21	16	17	29	46	54	31	13	55
14		19	58	31	2	55	28	12	3	44	16	14	29	57	54	52	14	18
15	♓	2	15	19	3	47	44	7	8	15	16	11	30	11	55	17	15	0
16		14	44	37	4	30	9	1	57	37	16	7	30	28	55	48	15	43
									B									
17		27	28	40	5	0	12	3	35	6	16	4	30	48	56	25	16	28
18	♈	10	30	8	5	15	40	8	59	54	16	1	31	10	57	6	17	15
19		23	50	47	5	14	46	14	7	59	15	58	31	35	58	51	18	4
20	♉	7	31	33	4	56	15	18	41	59	15	55	32	0	58	38	18	59
21		21	34	20	4	19	52	22	21	20	15	52	32	25	59	24	19	59
22	♊	5	58	22	3	26	30	24	43	9	15	49	32	48	60	5	21	2
23		20	39	55	2	18	25	25	26	20	15	45	33	5	60	36	22	6
24	♋	5	34	36	1	0	13	23	17	52	15	42	33	15	60	55	23	10
						A												
25		20	35	35	0	22	39	21	30	51	15	39	33	16	60	57	☌	
26	♌	5	34	10	1	43	53	17	13	16	15	36	33	8	60	43	0	10
27		20	21	42	2	56	42	11	55	7	15	33	32	51	60	11	1	5
28	♍	4	51	59	3	56	44	6	3	49	15	29	32	27	59	27	1	56
29		18	58	32	4	40	30	0	3	55	15	26	31	59	58	35	2	45
									A									
30	♎	2	39	1	5	6	47	5	44	38	15	23	31	27	57	37	3	32
31		15	52	59	5	15	43	11	6	23	15	20	30	58	56	44	4	17

JULIUS. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		B		
1	♍ 17.19 22	4 37 33	31.38	57.57
2	♎ 0.40.35	5 5 44	31. 8	57. 3
3	13.37.57	5 17 21	30.41	56.13
4	26.14.37	5 13 13	30.18	55.30
5	♏ 8.33.58	4 54 37	29.59	54.56
6	20.40. 6	4 23 12	29.46	54.31
7	♐ 2.37. 6	3 40 35	29.36	54.13
8	14.28.10	2 48 56	29.30	54. 2
9	26.16 33	1 50 7	29.29	54. 0
10	♑ 8. 4.53	0 46 46	29.30	54. 2
		B		
11	19 56.10	0 18 59	29 34	54.10
12	♒ 1.51.34	1 24 16	29.41	54.23
13	13.54 10	2 26 26	29 51	54 41
14	26. 5.30	3 22 40	30 4	55. 4
15	♓ 8 28.17	4 10 19	30.19	55 32
16	21. 4.42	4 46 51	30.37	56. 6
17	♈ 3.57. 7	5 9 52	30 59	56.45
18	17. 7.59	5 17 19	31 22	57.28
19	♉ 0.38.37	5 7 42	31.48	58.15
20	14 30 55	4 40 11	32 13	59. 1
21	28.43 53	3 55 7	32.37	59.45
22	♊ 13 17.21	2 54 1	32.56	60.21
23	28. 6. 2	1 40 13	33 11	60.48
24	♋ 13. 4.48	0 19 0	33.17	60.58
		A		
25	28. 5.41	1 3 48	33.13	60.52
26	♌ 12.59.57	2 21 39	33. 1	60.29
27	27.39.49	3 28 28	32.40	59 50
28	♍ 11.58.15	4 20 44	32.13	59. 2
29	25.52. 4	4 55 48	31.42	58. 6
30	♎ 9.19.12	5 13 20	31.12	57.10
31	22.20.32	5 13 56	30.45	56.19

Congreß. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H. M.	Distantia centri vera in latitudin. G. M.
1	e ♌ 4	19 44	0 54 B
3	q ♍ 6	2 56	0 5 B
8	A O ph. 5	17 48	0 51 B
10	λ ♐ 4	2 55	0 54 B
12	σ ♑ 6	8 12	0 45 B
	x ♑ 6	12 17	0 29 B
15	x ♒ 5	8 38	0 4 A
16	9 ♓ 6	10 22	0 27 B
	16 ♓ 6	15 4	0 34 B
20	ε ♈ 5	14 11	0 28 B
24	δ ♊ 3	16 21	0 16 B

JULIUS.

Dies Mens.	Aetas ☽	Phænomena & Observationes ☽
1	5	☾ in Aequator. et ad σ τ e υ ♌
2	6	☾ ad b η c q ♍
3	7	☾ ad γ ψ k g ♍
4	8	☾ ad α l h m ♍
5	9	☾ ad μ ξ α ♎
6	10	☾ ad ν ι ζ γ ♎
7	11	☾ ad β ω σ α ♏
8	12	Lunist. Austr. et ad α ρ ϑ Ophiuc.
9	13	☾ Apogæa et ad p. 6. γ. μ ♐
10	14	☾ ad λ φ ν σ τ ♐
11	15	☾ in nodo asc. et ad ψ χ f ω ♐
12	16	☾ ad σ β π ρ ♑
13	17	☾ ad η ϑ ζ ε ♑
14	18	☾ ad c λ δ μ ♑
15	19	☾ ad κ τ λ h ♒
16	20	☾ in Aequator. et ad 9. 14. 16. λ ♓
17	21	☾ ad d ♓
18	22	☾ ad ε e f μ ♓
19	23	☾ ad ι ϑ ξ ♈
20	24	☾ ad π σ ρ ε δ ♈
21	25	☾ ad Plejades.
22	26	Lunist bor. et ad α β ♉
23	27	☾ ad H. η. μ. ν ♊
24	28	☾ Perigæa et in nodo desc.
25	29	☾ ad ω μ ψ ζ ♋
26	1	☾ ad δ α κ ♋
27	2	☾ ad π η A α ♌
28	3	☾ ad l, d, χ, σ ♌
29	4	☾ in Aequatore et ad ω ν β b ♍
30	5	☾ ad χ γ ψ k ♍
31	6	☾ ad α l m ♍

Dies Mens.	Phænomena & Observationes Planetarum.
2	♄ in Quadratura cum ☉.
4	☿ in nodo asc.
5	♀ in Perihelio.
8	♀ ad μ ♋ h. 4. dist. centr. ♀ 6 m. austr.
10	☿ in Perihelio.
12	♀ ad η ♋ med. nocte dist. centr. ♀ 14 m. austr.
14	Conjunctio superior ☉ & ☿.
20	♂ ad β ♍ h. 20. dist. centr. ♂ 6 m. austr.
24	♄ ad 356 ♍ med. nocte dist. centr. ♄ 24 m. bor.
25	♀ ad o ♉ h. 3. dist. centr. ♀ 1 gr. 5 m. austr.
28	♀ in lat. max. hel.
31	♀ ad ζ ♉ h. 6. dist. centr. ♀ 0 m.

	Phases Lunæ.
3	Primus Quadrans hor. 7. m. 39. in ♎ gr. 11. m. 16.
11	Plenilunium hor. 10. m. 7. in ♑ gr. 19. m. 0.
19	Ultimus Quadrans. h. 4. m. 32. in ♈ gr. 26. m. 25.
25	Novilunium hor. 19. m. 25. in ♌ gr. 2. m. 44.

Planetæ in parallelis fixarum.

♅ mense toto ι Orion.
♄ 1 α Aqui. 13 ι Antin. ad fin. ζ Orion.
♃ mense toto 19 ♑.
♂ 1 α Orion. 7 β Aquil. 13 δ ♍ 19 α Ceti 25 α ♓.
♀ 1 η ♉ 7 γ ♋ 13 ζ ♊ 19 δ ♋ 25 δ ♉
☿ 1 μ ♊ 7 138 ♉. δ ♉. 19 A ♉ 25 γ ♈.

JULIUS.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	0	46	6	22	16	♎ 50	0 B	37	6 A	3	11	58
7	0	22	5	58	16	55	0	37	6	5	11	34
13	23	58	5	34	17	0	0	37	6	7	11	10
19	23	34	5	10	17	4	0	37	6	9	10	46
25	23	10	4	46	17	9	0	37	6	11	10	22
					♄ *Saturnus.*							
1	0	3	5	59	9	♎ 45	2 B	30	1 A	33	11	55
7	23	41	5	36	9	58	2	28	1	40	11	31
13	23	17	5	12	10	15	2	26	1	47	11	7
19	22	55	4	49	10	35	2	24	1	55	10	43
25	22	31	4	25	10	58	2	22	2	4	10	19
					♃ *Jupiter.*							
1	4	25	8	59	27	♏ 13	0 B	52	18 A	43	13	33
7	4	0	8	34	26	55	0	51	18	40	13	8
13	3	33	8	8	26	41	0	49	18	38	12	42
19	3	11	7	44	26	32	0	48	18	37	12	18
25	2	46	7	19	26	27	0	46	18	38	11	53
					♂ *Mars.*							
1	21	41	4	18	13	♍ 19	0 B	52	7 B	29	10	55
7	21	36	4	6	16	45	0	46	6	4	10	36
13	21	31	3	54	20	16	0	41	4	37	10	17
19	21	25	3	43	23	50	0	36	3	9	10	1
25	21	22	3	32	27	30	0	31	1	37	9	42
					♀ *Venus.*							
1	16	45	0	42	18	♋ 33	1 B	2	23 B	14	8	41
7	16	56	0	49	25	56	1	12	22	11	8	42
13	17	11	0	55	3	♌ 18	1	20	20	45	8	39
19	17	27	1	1	10	40	1	25	18	58	8	35
25	17	44	1	7	18	2	1	29	16	53	8	30
					☿ *Mercurius.*							
1	15	0	22	56	24	♊ 20	0 A	30	22 B	51	6	52
7	15	22	23	24	6	♋ 21	0 B	37	23	55	7	26
13	15	56	23	56	19	13	1	25	23	30	7	56
19	16	37	0	26	1	♌ 52	1	47	21	30	8	15
25	17	18	0	50	13	42	1	43	18	21	8	22

JULIUS.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Mens.	Emersiones. H. M. S.	D. Mensis.	Emersiones. H. M. S.	D. Mensis.	Emersiones. H. M. S.	D. Mensis	H. M. S.
2	5 53 8 M	21	5 7 6 V	1	1 44 19 V	8	0 12 48 V I
4	0*21 37 M	23	11 25 48 M	5	3 1 13 M		2 29 21 V E
5	6 50 3 V	25	6 4 31 M	8	4 18 9 V	12	4 10 19 V I
7	1 18 29 V	27	0 33 16 M	12	5 35 13 M		6 27 44 V E
9	7 46 56 M	28	7 2 5 V	15	6 52 29 V	19	8 7 38 V I
11	2 15 28 M	30	1 30 54 V	19	8 9 54 M		10*26 54 V E
12	8*44 0 V			22	9*27 30 V	27	0 7 27 M I
14	3 12 34 V			26	10 45 16 M		2 26 39 M E
16	9 41 9 M			30	0 3 12 V		
18	4 9 47 M						
19	10*38 26 V						

IV. Sat. ☍	
5	5 1 30 M
21	10 58 40 V

Julius

Dies		Situs Satellitum ♃ tub. astr. hor. 10. vesp.			
1		•4 •1 3•	○	•2	
2		•4 3•	○	1•2•	
3		•3 2•4	○		●I
4		•3 1•2	○		4○
5			○	•1 •3 •2 •4	
6		1•2•	○	•3 •4	
7		•2	○	1• 3• •4	
8	3○	•1	○	•2 •4	
9		3•	○	1•2• 4•	
10		•3 2• •1	○	4•	
11	1○	•3• •2	○	4•	
12			○	4 1 •3 •2	
13	2○	4•1•	○	•3	
14		4• 2•	○	•1 3•	
15		4• •1	○	3• •2	
16		4• 3•	○	1•2•	
17		•4 3• 2• •1	○		
18	1○	•4 •3 •2	○		
10		•4	○	2•	●3 ●I
20	2○	•4 1•	○	•3	
21		•2	○	•1 3•	4○
22		1•	○	•2 3• •4	
23		3•	○	1•2• •4	
24		3• 2• •1	○	•4	
25		•3 •2	○	1• 4•	
26	●I ●3		○	2• 4•	
27		1•	○	2• •3 4•	
28		2•	○	•1 4• 3•	
29	●2	1• 4•	○	3•	
30		4• 3•	○	1•2•	
31		4• 3• 2•1	○		

Dies		Situs Satellitum ♃ pro temp. Eclips. Vienn. vis.			
4		•3 2• •4	○	•1	Em. I.
12			○	•1 •3 4• •2	Em. I.
19	●I	•4	○	•3 •2	Em. III.
19		•4	○	•1 •3 •2	Em. I.
22		1•	○	•2 3• •4	Em. II.

AUGUSTUS. ☉

Dies Astronom.	Dies Mensis Civ.	Dies Hebdomad.	AUGUSTUS.	Tempus medium Meridiei veri. ☉ H.	M.	S.	D.	Decrementum diurnum temporis medii. S.	D.	Distantia ☉ ♈ a Meridiano. H.	M.	S.	D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero M.	S.	D.
213	1	Jovis.	Vinc. S. Pet.	0	5	56	5	3	6	15	15	38	0	3	52	8
214	2	Ven.	S. Stephan.	0	5	52	9	4	3	15	11	45	2	3	52	3
215	3	Sab.	Inv. S. St.	0	5	48	6	4	7	15	7	52	9	3	51	9
216	4	*F. Dom*	9 S. Domin.	0	5	43	9	5	2	15	4	1	0	3	51	2
217	5	Lun.	S. M. ad Niv.	0	5	38	7	5	9	15	0	9	8	3	50	6
218	6	Mart.	Transf. Dom.	0	5	32	8	6	6	14	56	19	2	3	50	0
219	7	Merc.	S. Cajetan.	0	5	26	3	7	3	14	52	29	2	3	49	4
220	8	Jov.	S. Cyriacus.	0	5	19	0	7	8	14	48	39	8	3	48	8
221	9	Ven.	S. Roman.	0	5	11	2	8	3	14	44	51	0	3	48	1
222	10	Sab.	S. Laurent.	0	5	2	9	8	9	14	41	2	9	3	47	5
223	11	*F. Dom*	10 S. Susanna.	0	4	54	0	9	6	14	37	15	4	3	47	0
224	12	Lun.	S. Clara.	0	4	44	4	10	2	14	33	28	4	3	46	4
225	13	Mart.	S. Hypolit.	0	4	34	2	10	6	14	29	42	0	3	45	9
226	14	Merc.	S. Euseb. ✝	0	4	23	6	11	2	14	25	56	1	3	45	4
227	15	*Jov.*	*Ass. B. V. M.*	0	4	12	4	11	7	14	22	10	7	3	44	8
228	16	Ven.	S. Rochus.	0	4	0	7	12	1	14	18	25	9	3	44	3
229	17	Sab.	S. Liberatus.	0	3	48	6	12	6	14	14	41	6	3	43	9
230	18	*F. Dom*	11 S. Joachim.	0	3	36	0	13	1	14	10	57	7	3	43	3
231	19	Lun.	S. Lud. Tol.	0	3	22	9	13	6	14	7	14	4	3	43	0
232	20	Mart.	S. Bernardus.	0	3	9	3	14	0	14	3	31	4	3	42	7
233	21	Merc.	S. Privat.	0	2	55	3	14	4	13	59	48	7	3	42	2
234	22	Jov.	SS. Tim. & S.	0	2	40	9	14	9	13	56	6	5	3	41	6
235	23	Ven.	S. Phil. B.	0	2	26	0	15	4	13	52	24	9	3	41	0
236	24	Sab	S. Barthol.	0	2	10	6	15	8	13	48	43	9	3	40	7
237	25	*F. Dom*	12 S. Lud. R.	0	1	54	8	16	2	13	45	3	2	3	40	4
238	26	Lun.	S. Zepher.	0	1	38	6	16	6	13	41	22	8	3	39	9
239	27	Mart.	S. Jos. Cal.	0	1	22	0	17	0	13	37	42	9	3	39	5
240	28	Merc.	S. Augustinus.	0	1	5	0	17	3	13	34	3	4	3	39	2
241	29	Jov.	Decoll. S. Joan.	0	0	47	7	17	7	13	30	24	2	3	38	8
242	30	Ven.	S. Rosa.	0	0	30	0	18	0	13	26	45	4	3	38	4
243	31	Sab.	S. Raymund.	0	0	12	0			13	23	7	0			

AUGUSTUS. ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♌	Motus horarius verus.	Ascensio recta.	Ascensio recta conversa.	Declinatio vera Borealis	Altitudo Centri ☉ vera.
	G. M. S.	M. S.	G. M. S.	H. M. S. D.	G. M. S.	G. M. S.
1	8. 39. 31	2. 23. 6	131 5 28	8.44.22. 0	18 7 1	59 54.25
2	9. 36. 57	2. 23. 6	132 3 41	8 48.14. 8	17 51 49	59 39 13
3	10. 34. 24	2. 23. 7	133 1 45	8 52. 7. 1	17 36 22	59 23 46
4	11 31 52	2. 23. 7	133 59 42	8.56.59. 0	17 20 37	59. 8. 1
5	12. 29. 22	2. 23. 8	134 57 31	9. [illegible] 50. 2	17 4 34	58 51.58
6	13. 26. 52	2. 23. 8	135 55 10	9. 3 40. 8	16 48 15	58.35 39
7	14. 24. 23	2. 23. 9	136 52 40	9. 7 30. 8	16 31 40	58 19. 4
8	15. 21. 56	2. 23. 9	137 50 2	9 11.20. 2	16 14 48	58. 2.12
9	16. 19. 29	2. 24. 0	138 47 13	9 15. 9. 0	15 57 43	57.45 7
10	17. 17. 2	2. 24. 0	139 44 17	9 18.57. 1	15 40 20	57.27 44
11	18. 14. 36	2. 24. 1	140 41 9	9 22.44. 6	15 22 43	57.10. 7
12	19. 12. 21	2. 24. 1	141 37 53	9.26 31. 6	15 4 51	56 52 15
13	20. 9. 48	2. 24. 2	142 34 29	9 30.18. 0	14 46 45	56.34. 9
14	21. 7. 27	2. 24. 2	143 30 58	9.34. 3. 9	14 28 23	56 15.47
15	22. 5. 8	2. 24. 3	144 27 19	9.37.49. 3	14 9 46	55.57 10
16	23. 2. 40	2. 24. 3	145 23 31	9.41.34. 1	13 50 57	55.38.21
17	24. 0. 32	2. 24. 4	146 19 37	9 45.18. 4	13 31 57	55.19.21
18	24. 58. 17	2. 24. 4	147 15 34	9 49. 2. 3	13 12 46	55. 0.10
19	25 56. 4	2. 24 5	148 11 25	9 52.45 6	12 53 20	54.40.44
20	26 53. 54	2. 24 6	149 7 10	9.56 28. 6	12 33 40	54.21. 4
21	27 51 46	2. 24. 6	150 2 49	10. 0 11. 3	12 13 47	54 1.11
22	28 49. 39	2. 24. 7	150 58 20	10. 3.53. 5	11 53 42	53 41 6
23	29 47. 31	2. 24. 8	151 53 43	10. 7.35. 1	11 33 27	53 20.51
24	0 ♍ 45. 25	2. 24. 8	152 48 59	10 11.16. 1	11 13 2	53. 0 26
25	1. 43. 22	2. 24. 9	153 44 10	10.14.56. 8	10 52 27	52.39 51
26	2. 41 22	2. 25. 0	154 39 16	10 18 37. 2	10 31 41	52.19. 5
27	3. 39. 23	2 25. 0	155 34 15	10.22.17. 1	10 10 44	51 58. 8
28	4. 37. 25	2. 25. 1	156 29 8	10.25 56. 6	9 49 37	51.37. 1
29	5. 35. 27	2. 25. 2	157 23 56	10.29.35. 8	9 28 19	51.15.43
30	6. 33. 32	2. 25. 2	158 18 38	10.33.14. 6	9 6 54	50.54.18
31	7. 31. 38	2. 25. 3	159 13 14	10.36.53. 0	8 45 20	50.32.44

A U G U S T U S. ⊙

Dies Mensis.	*Solis in Meridiano versantis.* Diameter ⊙ apparens. M.	S.	D.	Mora transitus disci ⊙ per Meridianum. M.	S.	D.	Distantia ⊙ à ♁. cujus Distantia media. 10000.	Ortus centri ⊙ verus. H.	M.	Occasus centri ⊙ verus. H.	M.
1	31	38	0	2	13	0	10146	16	35	7	25
2	31	38	3	2	12	8	10145	16	36	7	24
3	31	38	6	2	12	6	10143	16	37	7	23
4	31	38	8	2	12	5	10142	16	39	7	21
5	31	39	1	2	12	3	10140	16	40	7	20
6	31	39	4	2	12	1	10138	16	41	7	19
7	31	39	7	2	11	9	10137	16	43	7	17
8	31	40	0	2	11	7	10135	16	45	7	15
9	31	40	4	2	11	6	10133	16	46	7	14
10	31	40	7	2	11	4	10131	16	47	7	13
11	31	41	0	2	11	2	10130	16	49	7	11
12	31	41	4	2	11	1	10128	16	51	7	9
13	31	41	7	2	10	9	10126	16	53	7	7
14	31	42	1	2	10	8	10124	16	54	7	6
15	31	42	5	2	10	7	10122	16	55	7	5
16	31	42	8	2	10	5	10120	16	57	7	3
17	31	43	2	2	10	4	10118	16	58	7	2
18	31	43	6	2	10	3	10116	17	0	7	0
19	31	44	0	2	10	2	10114	17	1	6	59
20	31	44	4	2	10	1	10112	17	3	6	57
21	31	44	8	2	10	0	10110	17	5	6	55
22	31	45	2	2	9	9	10108	17	6	6	54
23	31	45	6	2	9	8	10106	17	8	6	52
24	31	46	0	2	9	7	10104	17	10	6	50
25	31	46	5	2	9	5	10102	17	11	6	49
26	31	46	9	2	9	4	10099	17	13	6	47
27	31	47	4	2	9	3	10097	17	15	6	45
28	31	47	8	2	9	1	10095	17	17	6	43
29	31	48	3	2	9	0	10093	17	19	6	41
30	31	48	7	2	8	9	10091	17	20	6	40
31	31	49	2	2	8	7	10088	17	21	6	39

Dies Mensis.	Phænomena & Observationes. ⊙
7	⊙ in parall. β Serp. c. h. 6. m. 24.
8	⊙ in parall. Aldeb. c. h. 19. m. 9.
12	⊙ in parall. α Delph. c. h. 11. m. 1.
14	⊙ in parall. Markab culm. h. 13. m. 17.
	⊙ in parall. Algen. c. h. 14. m. 25.
20	⊙ in parall. α Ophiu. c. h. 7. m. 28.
23	Ingressus ⊙ in 0 ♍ h. 5. m. 11.

AUGUSTUS. ☽

Loca Lunæ Sole in Meridiano verſante.

Dies Menſis.	Longitudo vera ☽ S.	G.	M.	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ aſcendens. G.	M.	Diam. ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M.
					A			A										
1	♎	28	42	21	5	8	18	15	49	19	15 ♑	17	30	32	55	56	5	4
2	♏	11	10	24	4	46	29	19	43	51	15	14	30	10	55	15	5	52
3		23	21	33	4	12	5	22	41	55	15	11	29	52	54	43	6	41
4	♐	5	20	0	3	27	19	24	36	52	15	8	29	40	54	21	7	30
5		17	11	10	2	33	59	25	23	53	15	5	29	34	54	9	8	19
6		28	59	1	1	34	22	25	2	8	15	1	29	31	54	5	9	10
7	♑	10	47	42	0	30	45	23	32	19	14	58	29	34	54	10	9	59
					B													
8		22	40	54	0	34	26	20	59	14	14	55	29	40	54	20	10	47
9	♒	4	41	4	1	38	39	17	31	4	14	52	29	48	54	36	11	33
10		16	50	52	2	39	6	13	16	35	14	49	29	59	54	56	12	17
11		29	11	26	3	33	3	8	26	22	14	46	30	12	55	20	13	0
12	♓	11	44	27	4	17	26	3	11	51	14	42	30	27	55	47	13	43
								B										
13		24	30	9	4	49	51	2	14	53	14	39	30	43	56	16	14	27
14	♈	7	29	15	5	8	5	7	41	16	14	36	31	0	56	47	15	13
15		20	42	9	5	10	25	12	52	49	14	33	31	18	57	20	16	2
16	♉	4	9	5	4	55	54	17	33	10	14	30	31	37	57	55	16	55
17		17	50	5	4	24	30	21	24	3	14	27	31	55	58	29	17	52
18	♊	1	45	30	3	37	4	24	4	44	14	24	32	13	59	2	18	52
19		15	54	56	2	35	45	25	18	11	14	20	32	30	59	33	19	55
20	♋	0	17	4	1	23	52	24	51	52	14	17	32	44	59	57	20	57
21		14	49	24	0	5	43	22	44	14	14	13	32	52	60	12	21	57
					A													
22		29	28	1	1	13	10	19	5	35	14	10	32	54	60	16	22	54
23	♌	14	7	27	2	27	8	14	15	42	14	7	32	48	60	6	23	47
24		28	40	59	3	30	53	8	39	15	14	4	32	35	59	42	☌	
25	♍	13	1	45	4	20	12	2	40	4	14	0	32	16	59	6	0	36
								A										
26		27	4	11	4	52	31	3	18	23	13	57	31	51	58	21	1	25
27	♎	10	43	47	5	7	3	8	57	14	13	54	31	24	57	32	2	13
28		23	59	6	5	4	31	14	1	36	13	51	30	57	56	42	3	1
29	♏	6	50	17	4	46	34	18	19	9	13	48	30	32	55	56	3	50
30		19	19	51	4	15	18	21	40	15	13	45	30	11	55	17	4	39
31	♐	1	31	13	3	33	10	23	57	57	13	41	29	53	54	45	5	29

AUGUSTUS. ☽

Dies Mensis	Loca Lunæ media nocte. Longit. vera ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis M. S.	Parallaxis ☽ horizontalis M. S.
		A		
1	♏ 4 58 48	4 59 3	30 20	55 34
2	17 17.47	4 30 44	30 1	55 58
3	29.22. 6	3 50 49	29 45	54 31
4	♐ 11.16.11	3 1 33	29 36	54 14
5	23. 5.17	2 4 49	29 32	54 6
6	♑ 4.53 3	1 2 55	29 32	54 6
		B		
7	16 43 34	0 1 47	29 36	54 14
8	28 40. 1	1 6 50	29 43	54 27
9	♒ 10 44 38	2 9 31	29 53	54 45
10	22.59 46	3 7 6	30 5	55 7
11	♓ 5.26.20	3 56 34	30 19	55 33
12	18. 5.43	4 35 15	30 35	56 1
13	♈ 0.57 59	5 0 50	30 51	56 31
14	14. 3 58	5 11 16	31 8	57 3
15	27.23 52	5 5 15	31 26	57 37
16	♉ 10.57.52	4 42 13	31 46	58 12
17	24.46. 2	4 2 38	32 5	58 46
18	♊ 8.48.36	3 7 55	32 22	59 18
19	23. 4 35	2 0 51	32 37	59 46
20	♋ 7.32.13	0 45 15	32 48	60 6
		A		
21	22. 8 15	0 33 59	32 54	60 16
22	♌ 6.48. 1	1 51 3	32 52	60 13
23	21 25.20	3 0 31	32 43	59 56
24	♍ 5.53.19	3 57 30	32 26	59 26
25	20. 5.28	4 38 31	32 4	58 45
26	♎ 3 56.58	5 1 57	31 38	57 57
27	17.24.29	5 7 49	31 11	57 7
28	♏ 0.27 34	4 57 21	30 45	56 19
29	13. 7.31	4 32 28	30 21	55 36
30	25.27.34	3 55 26	30 1	55 0
31	♐ 7.32. 0	3 8 35	29 47	54 33

Congress. ☽ cum fixis & Planet.

Dies Mensis	Nomen & Characteres fixarum & Planetarum	Tempus verum conjunctionis in longitud. H. M.	Distantia centri ☽ vera in latitudinem G. M.
3	A ♏ 5	10 56	1 2 B
6	λ ♐ 4	9 25	0 56 B
8	σ ♏ 6	14 36	0 45 B
	2 ο ♑ 6	19 40	1 2 B
10	λ ♑ 5	10 39	1 7 B
12	n ♓ 5	15 57	0 14 B
	9 ♓ 6	16 0	0 23 B
	16 ♓ 6	20 40	0 30 B
16	μ ♈ 6	13 9	0 38 B
19	132 ♉ 6	14 51	0 45 B

AUGUSTUS.

Dies Mensis	Aetas ☾	Phænomena & Observationes ☽.
1	7	☾ ad κ λ ♍
2	8	☾ ad κ ξ ν ι ζ ♎
3	9	☾ ad π δ β ω ν ♏
4	10	☾ Apog. et ad α τ ♏
5	11	Lunist. austr. ☾ ad p. b ♐
6	12	☾ ad μ δ λ φ ♐
7	13	☾ in nodo asc. et ad ο τ π ♐
8	14	☾ ad σ β π ρ ♑
9	15	☾ ad η ϑ ♑ φ ν ♒
10	16	☾ ad ν δ μ ♑
11	17	☾ ad ρ σ κ τ ♒
12	18	☾ in Aequatore et ad ψ χ φ ♒
13	19	☾ ad 19. 21. 30. 33 ♓
14	20	☾ ad δ ε e f ♓
15	21	☾ ad η π ν ο ♓
16	22	☾ ad μ ο κ σ ♈
17	23	☾ ad Plejades
18	24	☾ ad δ ϑ α ♉
19	25	Lunist. bor. et ad β ζ ♉
20	26	☾ Perigæa et ad μ ν γ ε ♊
21	27	☾ in nodo desc. et ad δ ι ♊ ψ μ ♋
22	28	☾ ad ϑ η γ δ α ♋
23	29	☾ ad ω ξ ο η α ♌
24	1	☾ ad ρ δ c χ ♌
25	2	☾ in Aequatore et ad τ υ ♌ b r ♍
26	3	☾ ad η c q χ ♍
27	4	☾ ad ψ k g ϑ α ♍
28	5	☾ ad 95. κ λ ♍
29	6	☾ ad α ξ ν ♎
30	7	☾ ad γ κ η ♎ δ π ♏
31	8	☾ ad σ α τ ♏

Dies Mensis	Phænomena & Observationes Planetarum.
1	♀ ad Regul. h. 9. dist. centr. ♀ 1 gr. 5 m. bor.
11	☿ in nodo descendente.
13	♀ ad χ ♌ h. 9. dist. centr. ♀ 0 gr. 3 m. bor.
16	♀ ad σ ♌ h. 19. dist. centr. ♀ 0 gr. 22 m. austr.
17	⚳ ad H ♊ dist. centr. ⚳ 0 gr. 32 m. austr.
19	☌ ♂ et ♄.
21	♃ in Quadratura cum sole.
	☿ in Aphelio.
22	♃ ad λ ♎ h. 18. dist. centr. ♃ 0 gr. 34 min. bor.
23	♄ ad 424 ♍ hor. 17, dist centr. ♄ 0 gr. 36 min. austr.
24	⚳ ad η ♊ h. 4. dist. centr. ⚳ 0 gr. 37 austr.
25	☿ in elong. max. orient.
29	♀ in distantia media a sole.
	⚳ ad μ ♊ h. 14. dist. centr. ⚳ 0 gr. 32 m. austr.
30	♀ ad η ♍ merid. dist. centr. ♀ 0 gr. 24 m. austr.

Phases Lunæ.

1 Primus Quadrans h. 20 m. 43 in ♏ gr. 9 m. 29.

10 Plenilunium hor. 0 m. 55 in ♒ gr. 17. min. 19.

17 Ultimus Quadrans h. 11 m. 29. in ♉ gr. 24 m. 28.

24 Novilunium hor. 3 m. 42 in ♍ gr. 0 min. 54.

31 Primus Quadrans h. 13. m. 3. in ♐ gr. 8. m. 3.

Planetæ in Parallelis fixarum.

♅ mense toto β ♒

♄ sub. init. γ ♒ ad finem μ Serpentis

♃ sub init. 19 ♑ ν ♏ ad finem κ ♎

♂ 1 γ ♍ 7 ι Antinoi 13 δ Oph. 19 ϑ ♍ 25 β ♒.

♀ 1 γ Pegasi 7 δ Serpentis 13 β Can. minor 19 Procyon 25 δ Aquilæ.

☿ 1 β Delph. 7 β ♋ 13 Procyon. 19 α ♓ 25 ϑ Aquilæ.

AUGUSTUS.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis planetarum. H.	M.	Longitudo planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H	M.
					♅ *Uranie.*							
1	22	45	4	20	17	♎ 25	0 B	36	6 A	18	9	55
7	22	24	3	58	17	37	0	36	6	23	9	32
13	22	3	3	36	17	50	0	36	6	29	9	9
19	21	41	3	14	18	6	0	36	6	34	8	47
25	21	20	2	52	18	23	0	36	6	40	8	24
					♄ *Saturnus.*							
1	22	9	4	1	11	♎ 27	2 B	23	2 A	19	9	53
7	21	49	3	40	11	57	2	23	2	32	9	31
13	21	29	3	19	12	28	2	22	2	45	9	9
19	21	9	2	58	13	0	2	21	2	59	8	47
25	20	49	2	37	13	34	2	19	3	13	8	25
					♃ *Jupiter.*							
1	2	18	6	52	26	♏ 33	0 B	45	18 A	41	11	26
7	1	56	6	30	26	45	0	43	18	45	11	4
13	1	36	6	9	27	3	0	42	18	51	10	42
19	1	16	5	48	27	27	0	41	18	58	10	20
25	0	56	5	28	27	57	0	39	19	6	10	0
					♂ *Mars.*							
1	21	17	3	20	1	♎ 9	0 B	25	0 A	5	9	23
7	21	16	3	11	4	54	0	20	1	38	9	7
13	21	14	3	2	8	40	0	15	3	12	8	50
19	21	12	2	54	12	29	0	11	4	46	8	36
25	21	10	2	45	16	21	0	7	6	20	8	20
					♀ *Venus.*							
1	18	5	1	13	26	♌ 38	1 B	30	14 B	4	8	21
7	18	22	1	18	3	♍ 59	1	28	11	26	8	14
13	18	40	1	23	11	20	1	24	8	37	8	6
19	18	59	1	28	18	41	1	17	5	40	7	57
25	19	16	1	32	26	1	1	8	2	37	7	48
					☿ *Mercurius.*							
1	18	4	1	12	26	♌ 18	1 B	14	13 B	55	8	20
7	18	37	1	25	5	♍ 2	0	33	9	48	8	13
13	19	3	1	33	14	46	0 A	17	5	42	8	3
19	19	25	1	38	22	28	1	14	1	51	7	51
25	19	37	1	35	28	56	2	12	1 A	36	7	33

AUGUSTUS.

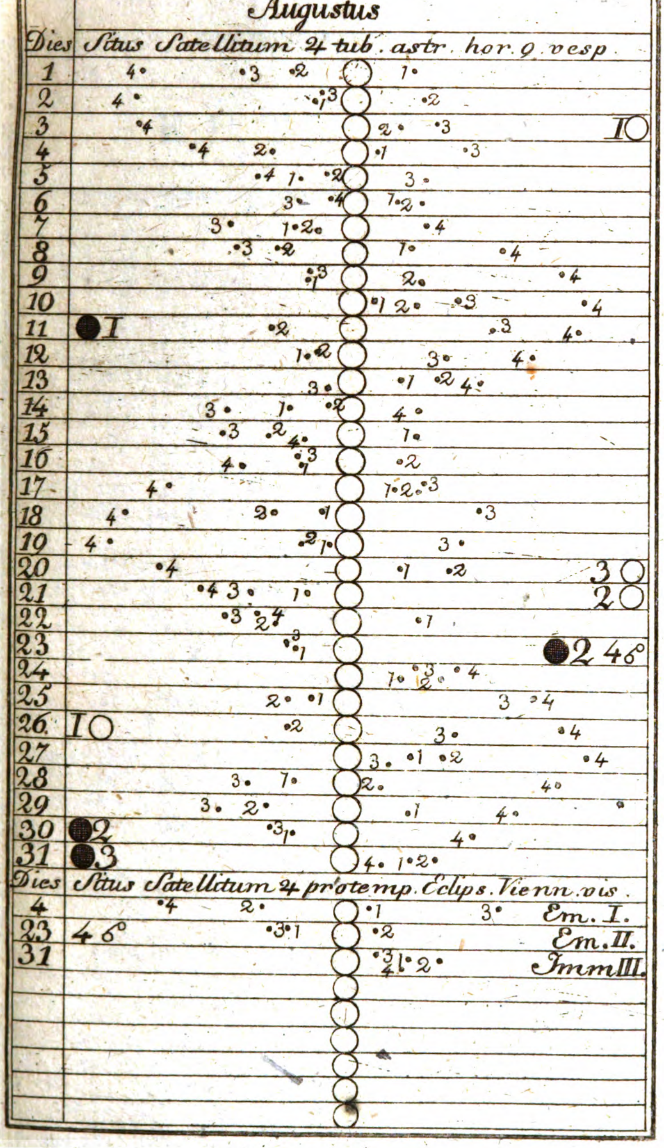
Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Menf.	Emerfiones. H. M. S.	D. Menf.	Emerfiones. H. M. S.	D. Menf.	Emerfiones. H. M. S.	D. Menf.	H. M. S.
1	7 59 58 M	20	7 19.16 V	2	1 21 18 V	3	4 7 38 M I
3	2 28 41 M	22	1 48 28 V	6	2 39 39 M		6 27 46 M E
4	8* 57 36 V	24	8 17 41 M	9	3 57 54 V	10	8 7 40 M I
6	3 26 33 V	26	2 46.56 M	13	5 16 32 M		10 28 43 M E
8	9 55 34 M	27	9 16. 9 V	16	6 35 22 V	17	0 8 12 V I
10	4 24 34 M	29	3 45.25 V	20	7 54 18 M		2 30 17 V E
11	10 53 38 V	31	10 14.42 M	23	9* 13 24 V	24	3 58 43 V I
13	5 22 42 V			27	10 32 35 M		6 31 40 V E
15	11 51 50 M			30	11 51 57 V	31	8* 9 31 V I
17	6 20 57 M						10 33 23 V E
19	0 50 6 M						

IV. Sat. ♂	
7	5 1 29 V
24	11 5 54 M



Augustus


Dies Situs Satellitum ♃ tub. astr. hor. 9. vesp.
Dies Situs Satellitum ♃ pro temp. Eclips. Vienn. vis.
Em. I.
Em. II.
Imm III.

SEPTEMBER. ☉

Dies Astronom.	Dies Mensis Civil.	Dies Hebdomad.	SEPTEMBER.	Tempus medium Meridiei veri ☉. H. M. S. D.	Decrementum diurnum Temporis medii S. D.	Distantia ☉ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D
244	1	*F.Dom*	13 *Fest.SS.Ang.*	23.59 53. 5	18. 6	13.19.28. 9	3 38 0
245	2	Lun.	S. Stephan R.	23 59 34. 9	19. 1	13.15 50 9	3 37 4
246	3	Mart.	S. Mansuetus.	23.59.15. 8	19. 3	13.12.13. 5	3 37 1
247	4	Merc.	S. Rosalia.	23.58 56. 5	19 7	13. 8.36. 4	3 36 8
248	5	Jov.	S. Victorin.	23.58 36. 8	19. 9	13. 4.59. 6	3 36 6
249	6	Ven.	S. Zach. Pr.	23.58.16. 9	20. 1	13. 1.23. 0	3 36 4
250	7	Sabb.	S. Regina.	23.57.56. 8	20. 4	12.57.46. 6	3 36 1
251	8	*F.Dom*	14 *Nat.B. V. M.*	23.57 36. 4	20. 6	12.54.10. 5	3 36 0
252	9	Lun.	S. Corbinian	23 57.15. 8	20. 6	12.50.34. 5	3 35 9
253	10	Mart.	S. Nicol. Tol.	23.56.55. 2	20 6	12.46.58. 6	3 35 9
254	11	Merc.	S. Prot. & Hyac.	23.56.34 6	20. 7	12.43.22. 7	3 35 8
255	12	Jov.	S. Tobias.	23.56.13. 9	20 8	12.39.46. 9	3 35 7
256	13	Ven.	S. Maurilius.	23.55.53. 1	20 9	12.36.11. 2	3 35 7
257	14	Sabb.	Exalt. S. Cruc.	23.55.32. 2	20. 9	12.32.35. 5	3 35 5
258	15	*F.Dom*	15 *F.N.B.V.M.*	23.55 11. 3	21. 0	12.29. 0 0	3 35 5
259	16	Lun.	S. Ludmilla.	23 54 50. 3	21. 1	12.25 24. 5	3 35 4
260	17	Mart.	S. Lambertus.	23.54.29. 2	21. 0	12.21.49. 1	3 35 4
261	18	Merc.	Quat. Temp. †	23.54. 8. 2	21. 1	12 18 13. 7	3 35 4
262	19	Jov.	S. Januarius	23.53 47. 1	21. 0	12.14.38. 3	3 35 5
263	20	Ven.	S. Eustachius. †	23.53.26. 1	21 0	12.11. 2. 8	3 35 6
264	21	Sab.	S. Matth. Ap. †	23.53. 5. 1	20 8	12. 7.27. 2	3 35 7
265	22	*F. Dom*	16 S. Mauritius	23.52.44. 3	20. 6	12. 3.51. 5	3 36 0
266	23	Lun.	S. Thecla V.	23 52.23. 7	20. 3	12. 0.15. 5	3 36 0
267	24	Mart.	S. Gerardus.	23 52. 3. 4	20. 3	11.56.39. 5	3 36 2
268	25	Merc.	S. Cleophas.	23.51.43. 1	20. 2	11.53. 3. 3	3 36 2
269	26	Jov.	S. Justina.	23.51.22. 9	20. 1	11.49.27. 1	3 36 5
270	27	Ven.	S.S.Cos.& Dam.	23.51. 2. 8	19. 8	11.45 50. 6	3 36 7
271	28		S. Wenceslaus	23.50.43. 0	19. 6	11 42.13. 9	3 37 0
272	29	*F. Dom*	17 S. Michael.	23.50 23. 4	19. 4	11.38.36. 9	3 37 1
273	30	Lun.	S. Hieronym.	23.50. 3. 9		11.34.59. 8	

SEPTEMBER. ☉

Solis in meridiano verſantis.

Dies Menſis.	Longitudo vera. ♍	Motus horarius verus.	Aſcenſio recta.	Aſcenſio recta converſa	Declinatio vera Borealis.	Altitudo centri ☉ vera.
	G. M. S.	M. S.	G. M. S.	H. M. S. D.	G. M. S.	G. M. S.
1	8. 29. 46	2. 25. 3	160. 7.46	10.40 31. 1	8.23.37	50. 11 1
2	9. 27. 55	2. 25. 4	161. 2.14	10.44. 9. 1	8. 1 48	49. 49 12
3	10. 26. 4	2. 25. 4	161 56.36	10 47.46. 5	7.39.50	49. 27 14
4	11. 24. 15	2. 25. 5	162.50.53	10.51.23. 6	7.17.45	49. 5 9
5	12. 22. 26	2. 25. 6	163.45. 5	10.55. 0. 4	6 55.33	48. 42 57
6	13. 20. 38	2. 25. 6	164 39 14	10 58.37. 0	6.33.15	48. 20 39
7	14. 18. 51	2. 25. 7	165 33 20	11. 2.13. 4	6.10.50	47. 58 14
8	15. 17. 8	2. 25. 8	166 27.22	11. 5 49. 5	5.48.20	47. 35 44
9	16. 15. 17	2. 25. 9	167.21.22	11. 9.25. 5	5.25.43	47. 13 7
10	17. 13. 49	2. 25. 9	168.15.20	11.13. 1. 4	5. 3. 0	46. 50 24
11	18. 12. 14	2. 26. 0	169. 9.19	11.16 37. 3	4.40.11	46. 27 35
12	19. 10. 41	2. 26. 1	170. 3.16	11.20.13. 1	4.17.17	46. 4 41
13	20. 9. 11	2. 26. 2	170 57.12	11.23.48. 8	3.54.18	45. 41 42
14	21. 7. 43	2. 26. 3	171.51. 7	11.27.24. 5	3 31.16	45. 18 40
15	22. 6. 15	2. 26. 4	172 45. 0	11.31. 0. 0	3 7.11	44. 54 35
16	23. 4. 49	2. 26. 4	173.38 52	11 34 35. 5	2 45. 1	44. 32 25
17	24. 3. 25	2. 26. 5	174 32.44	11.38.10. 9	2 21 48	44. 9 12
18	25. 2. 2	2. 26. 6	175 26 35	11.41 46. 3	1 58.32	43. 45 56
19	26. 0. 42	2. 26. 7	176.20.26	11 45.21. 7	1.35.14	43. 22 38
20	26. 59. 24	2. 26. 8	177.14 28	11.48.57. 2	1.11.54	42. 59 18
21	27. 58. 9	2. 26. 9	178. 8.12	11 52.32. 8	0.48 32	42. 35 56
22	28. 56. 56	2. 27. 0	179. 2. 8	11 56. 8. 5	0.25 7	42. 12 31
23	29. 55. 46	2. 27. 1	179.56. 7	11.59.44. 5	0. 1.41	41. 49 5
					Auſtr.	
24	0. ♎ 54. 38	2. 27. 2	180.50. 8	12. 3.20. 5	0.21.45	41. 25 39
25	1. 53. 32	2. 27. 3	181.44 10	12. 6.56. 7	0.45 11	41. 2 13
26	2. 52. 28	2. 27. 4	182.38.14	12.10.32. 9	1. 8.38	40. 38 46
27	3. 51. 27	2. 27. 4	182.32.20	12.14. 9. 4	1.32. 6	40. 15 18
28	4. 50. 28	2. 27. 5	184.26 30	12.17.46. 1	1.55 32	39. 51 52
29	5. 49. 30	2. 27. 6	185.20.43	12.21.23. 1	2.18.57	39. 28 27
30	6. 48. 32	2. 27. 7	186.15. 2	12.25. 0. 2	2.42 21	39. 5 3

SEPTEMBER. ☉

Dies Mensis.	Solis in Meridiano versantis: Diameter ☉ apparens. M.	S.	D.	Mora transitus disci ☉ per meridianum M.	S.	D.	Distantia ☉ a ♉ cujus distant. med. 10000.	Ortus Centri ☉ verus. H.	M.	Occasus centri ☉ verus. H.	M.
1	31	49	8	2	8	6	10085	17	23	6	37
2	31	50	3	2	8	5	10082	17	24	6	36
3	31	50	8	2	8	5	10079	17	26	6	34
4	31	51	2	2	8	4	10077	17	28	6	32
5	31	51	7	2	8	3	10074	17	29	6	31
6	31	52	2	2	8	3	10071	17	30	6	30
7	31	52	7	2	8	2	10069	17	31	6	29
8	31	53	2	2	8	2	10066	17	33	6	27
9	31	53	7	2	8	1	10064	17	35	6	25
10	31	54	2	2	8	1	10061	17	37	6	23
11	31	54	7	2	8	1	10058	17	39	6	21
12	31	55	2	2	8	0	10055	17	41	6	19
13	31	55	7	2	8	0	10053	17	43	6	17
14	31	56	2	2	8	0	10050	17	45	6	15
15	31	56	8	2	8	0	10048	17	46	6	14
16	31	57	3	2	8	0	10045	17	47	6	13
17	31	57	8	2	7	9	10042	17	48	6	12
18	31	58	4	2	7	9	10040	17	50	6	1[illegible]
19	31	58	9	2	7	9	10037	17	52	6	8
20	31	59	4	2	7	9	10034	17	54	6	6
21	32	0	0	2	7	9	10031	17	56	6	4
22	32	0	5	2	7	9	10028	17	58	6	2
23	32	1	1	2	8	0	10026	18	0	6	0
24	32	1	6	2	8	0	10023	18	1	5	59
25	32	2	2	2	8	1	10020	18	3	5	57
26	32	2	7	2	8	1	10017	18	5	5	55
27	32	3	3	2	8	2	10014	18	7	5	53
28	32	3	8	2	8	2	10011	18	9	5	51
29	32	4	3	2	8	3	10008	18	11	5	49
30	32	4	9	2	8	4	10005	18	13	5	47

Dies Mensis.	Phænomena & Observationes ☉
1	☉ in parall. α Aquilæ culm. h. 9. m. 0.
3	☉ in parall. α Orionis culm. h. 18. m. 53.
7	☉ in parall. Procyon. culm. h. 20. m. 23.
14	☉ in parall. α Ceti culm. h. 15. m. 21.
18	☉ in parall. α ♓ culm. h. 14. m. 7.
23	Ingressus ☉ in ♎ h. 1. m. 44.
26	☉ in parall. α ♒ culm. h. 9. m. 42.

SEPTEMBER. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽				Latitudo vera ☽			Declinatio vera ☽			Nodus ☽ ascendens		Diameter ☽ horizontalis.		Parallaxis ☽ horizontalis.		Tempus culm. ☽	
	S.	G.	M.	S.	G.	M.	S.	G.	M.	S.	G.	M.	M.	S.	M.	S.	H.	M.
						A		A										
1	♐	13	30	3	2	41	54	25	7	28	13 ♑	38	29	42	54	24	6	19
2		25	20	31	1	44	26	25	7	26	13	35	29	36	54	14	7	9
3	♑	7	8	18	0	42	53	23	59	17	13	32	29	35	54	12	7	59
						B												
4		18	58	44	0	20	44	21	46	49	13	29	29	40	54	20	8	47
5	♒	0	55	32	1	23	53	18	36	38	13	25	29	48	54	36	9	34
6		13	3	40	2	23	57	14	36	52	13	22	30	1	55	0	10	20
7		25	25	14	3	18	21	9	56	50	13	19	30	16	55	27	11	4
8	♓	8	2	3	4	4	0	4	47	31	13	16	30	33	55	57	11	48
								B										
9		20	54	30	4	38	10	0	39	15	13	13	30	50	56	29	12	33
10	♈	4	2	14	4	58	31	6	30	13	13	10	31	7	57	1	13	19
11		17	23	37	5	3	0	11	29	49	13	6	31	23	57	30	14	8
12	♉	0	56	54	4	51	7	16	21	30	13	3	31	38	57	57	15	0
13		14	39	48	4	21	48	20	25	13	13	0	31	50	58	20	15	56
14		28	31	11	3	37	3	23	22	44	12	57	32	2	58	41	16	55
15	♊	12	29	5	2	38	51	24	56	36	12	54	32	12	58	59	17	56
16		26	32	44	1	31	1	24	56	14	12	51	32	20	59	14	18	57
17	♋	10	41	11	0	17	1	23	19	10	12	47	32	25	59	23	19	56
						A												
18		24	53	28	0	58	10	20	13	21	12	44	32	27	59	27	20	52
19	♌	9	7	59	2	9	49	15	54	19	12	41	32	26	59	25	21	45
20		23	21	33	3	13	36	10	42	16	12	38	32	19	59	13	22	36
21	♍	7	30	41	4	4	12	4	58	53	12	35	32	8	58	53	23	24
								A										
22		21	30	56	4	39	48	0	55	3	12	32	31	58	58	25	♂	
23	♎	5	16	55	4	58	26	6	39	50	12	28	31	34	57	49	0	12
24		18	45	27	4	59	50	11	58	25	12	25	31	12	57	9	1	0
25	♏	1	54	5	4	45	11	16	36	10	12	22	30	49	56	27	1	49
26		14	41	46	4	16	18	20	20	35	12	19	30	28	55	48	2	39
27		27	9	49	3	35	49	23	2	42	12	16	30	8	55	13	3	29
28	♐	9	21	4	2	45	54	24	36	40	12	13	29	52	54	44	4	20
29		21	19	17	1	49	43	25	0	37	12	10	29	42	54	24	5	11
30	♑	3	9	32	0	49	19	25	15	8	12	6	29	37	54	15	6	1

SEPTEMBER. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longitudo vera. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		A		
1	♐ 19.26. 1	2 13 45	29.39	54.18
2	♑ 1.14.26	1 14 3	29.35	54.12
3	13. 2.55	0 11 11	29.37	54.15
		B		
4	24.56. 7	0 52 31	29 43	54.27
5	♒ 6 57.59	1 54 28	29 54	54 47
6	19.12 44	2 52 0	30. 8	55.13
7	♓ 1.41.42	3 42 27	30.24	55.42
8	14 26 22	4 22 39	30 41	56.13
9	27.26 32	4 50 10	30.59	56.45
10	♈ 10.41 21	5 2 49	31.16	57.16
11	24. 8.52	4 59 3	31.31	57.44
12	♉ 7.47.17	4 38 37	31.45	58. 9
13	21 34.29	4 1 9	31.56	58 31
14	♊ 5.29.25	3 9 28	32 7	58.50
15	19 30.16	2 5 54	32.16	59. 7
16	♋ 3.36.28	0 54 31	32.23	59.19
		A		
17	17.46.58	0 20 43	32.27	59.26
18	♌ 2. 0.37	1 34 43	32.27	59.27
19	16.15. 7	2 42 48	32.23	59.20
20	♍ 0.26 56	3 40 28	32.14	59. 4
21	14.32 11	4 24 0	32. 1	58.40
22	28.25.56	4 51 15	31.44	58. 8
23	♎ 12. 3.28	5 1 13	31.23	57 30
24	25.22.18	4 54 23	31. 0	56 48
25	♏ 8.20.29	4 32 22	30.38	56. 7
26	20.58. 3	3 57 20	30.18	55.30
27	♐ 3.17 17	3 11 54	30. 1	54 58
28	15.21.29	2 8 35	29.47	54.33
29	27.15. 3	1 19 53	29.39	54.18
30	♑ 9. 3.23	0 18 13	29.36	54.14

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H.	M.	Distantia centri vera in latitudin. G.	M.
1	A Oph. 5	7	42	1	2 B
2	λ ♐ 4	16	47	1	4 B
6	λ ♑ 5	17	58	1	8 B
7	ϑ ♒ 4	9	49	0	55 B
	ρ ♒ 5	11	15	1	18 B
9	16 ♓ 6	3	18	0	26 B
	19 ♓ 6	8	32	0	14 B
12	μ ♈ 6	18	40	0	27 B
15	132 ♉ 6	20	59	0	33 B

SEPTEMBER.

D. Menf.	Aetas ☾	Phænomena & Obſervationes ☽.
1	9	Lunist. auſtr. et ad A ϱ ϑ Oph.
2	10	☾ Apogæa et ad μ δ λ ♐
3	11	☾ in nodo aſc. et ad ο τ π ♐
4	12	☾ ad f ω A g ♐
5	13	☾ ad β ψ η ♑
6	14	☾ ad ε γ λ δ ♑
7	15	☾ ad ϑ ζ σ κ ♒
8	16	☾ in Aequat. et ad φ ψ χ ♒
9	17	☾ ad λ 30. 33 ♓
10	18	☾ ad d δ ε e ♓
11	19	☾ ad μ η κ ν ♓
12	20	☾ ad ϑ ξ μ ο ν
13	21	☾ ad ε δ ζ ν η ♉
14	22	☾ ad γ δ ϑ α ♉
15	23	Lunist. bor. et ad β ζ ♉
16	24	☾ ad H η μ γ ε ♊
17	25	☾ Perigæa et in nodo deſcend.
18	26	☾ ad μ ψ λ ϑ ♋
19	27	☾ ad α κ ξ ♋
20	28	☾ ad η α ρ ♌
21	29	☾ in Aequatore et ad χ σ τ e ♌
22	30	☾ ad β ♌ β b ♍
23	1	☾ ad γ χ ψ ϑ ♍
24	2	☾ ad α ι l m ♍
25	3	☾ ad α μ ξ ♎
26	4	☾ ad ν ι ζ γ ♎
27	5	☾ ad β ν σ α ♏
28	6	Luniſtitium auſtr. et ad A ϱ ϑ Oph.
29	7	☾ ad p b γ δ ♐
30	8	☾ ad Φ ν σ ο ♐

D. Menf.	Phænomena & Obſervationes Planetarum.
2	♂ in nodo deſc.
9	♄ ad ♀ h. 6. diſt. centr. ♄ 1 gr. 49m. bor.
11	♄ ad ϑ ♍ h. 22. diſt. centr. ♄ 0 gr. 52 m. bor.
15	♃ ad β ♏ h. 10. diſt. cent. ♃ 0 gr. 27 m. auſtr.
18	♃ ad 1 ω ♏ hor. 14. diſt. centr. ♃ 0 gr. 19 m. bor.
19	♃ ad 1 κ ♏ hor. 19. diſt. centr. ♃ 0 gr. 19 m. bor.
20	☿ ad d ♊ h. 4. diſt. centr. ☿ 0 gr. 31 m. bor.
	Conjunctio inferior ☿ et ☉.
25	♃ ad ν ♏ h. 11 diſt. cent. ♃ 1 gr. 7 m. auſtr.
	♀ ad λ ♍ h. 9. diſt. centr. ♀ 0 gr. 42 m. auſtr.

	Phaſes Lunæ.
8	Plenilunium h. 14 m. 41 in ♓ gr. 15. m. 53.
15	Ultimus Quadrans h. 17. m. 39 in ♊ gr. 22. m. 49.
22	Novilunium h. 13. m. 53 in ♍ gr. 29 m. 30.
30	Primus Quadrans hor. 8, m. 2. in ♑ gr. 7. m. 8.

Planetæ in parallelis fixarum.

♅ in radiis ſolis.
♄ in radiis ſolis.
♃ ſub init. β ♏ ad finem λ ♎.
♂ 1. μ Oph. 7 η Erid. 13 η Ceti 19 ε Ceti 25 γ ♎.
♀ 1. δ Ceti 7 ο Ceti 13 φ ♒ 19 ι Ceti 25 ε Ceti.
☿ 1. ϑ ♍ 7 ι Orion 13 17 Erid. 25 ω ♓

SEPTEMBER.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	20	57	2	29	18	♎ 44	0 B	35	6 A	49	8	1
7	20	38	2	9	19	3	0	35	6	57	7	40
13	20	17	1	48	19	23	0	35	7	4	7	19
19	19	58	1	28	19	44	0	35	7	12	6	58
25	19	37	1	7	20	5	0	35	7	21	6	37
					♄ *Saturnus.*							
1	20	28	2	15	14	♎ 20	2 B	18	3 A	31	8	2
7	20	16	1	56	14	59	2	18	3	47	7	41
13	19	52	1	37	15	40	2	17	4	4	7	22
19	19	35	1	18	16	21	2	16	4	20	7	1
25	19	18	1	0	17	3	2	16	4	37	6	42
					♃ *Jupiter.*							
1	0	34	5	5	28	♏ 46	0 B	38	19 A	16	9	36
7	0	16	4	46	29	22	0	37	19	27	9	16
13	23	59	4	28	0	♐ 9	0	36	19	39	8	57
19	23	42	4	10	1	1	0	34	19	50	8	38
25	23	25	3	52	1	55	0	33	20	2	8	19
					♂ *Mars.*							
1	21	14	2	36	20	♎ 53	0 B	2	8 A	9	7	58
7	21	10	2	29	24	51	0 A	3	9	41	7	48
13	21	10	2	23	29	51	0	7	11	11	7	36
19	21	12	2	17	2	♏ 53	0	11	12	40	7	22
25	21	12	2	11	6	59	0	15	14	6	7	10
					♀ *Venus.*							
1	19	37	1	37	4	♎ 35	0 B	54	0 A	59	7	37
7	19	57	1	42	11	54	0	40	4	6	7	27
13	20	16	1	47	19	12	0	24	7	9	7	18
19	20	35	1	53	26	30	0	7	10	6	7	11
25	20	54	1	59	3	♏ 47	0 A	11	12	57	7	[illegible]
					☿ *Mercurius.*							
1	19	42	1	30	4	♎ 20	3 A	17	4 A	44	7	1[illegible]
7	19	38	1	14	6	16	3	58	6	7	6	5[illegible]
13	19	9	0	46	4	37	4	6	5	37	6	2[illegible]
19	18	17	0	6	29	♍ 18	3	16	2	43	5	5[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SEPTEMBER.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Menf.	Emerfiones. H. M. S.	D. Menfis.	Emerfiones. H. M. S.	D. Menfis.	Emerfiones. H. M. S.	D. Menfis	H. M. S.
2	4 44 2 M	21	4 6.49 V	3	1 11 11 V	8	0 11 0 M I
3	11 13 21 V	23	10 36. 7 M	7	2 30 45 M		2 25 41 M E
5	5 42 41 V	25	5 5.26 M	10	3 50 28 V	15	4 12 24 M I
7	0 12 0 V	27	0 4.45 M	14	5 10 8 M		6 38 16 M E
9	6 41 22 M	28	6 4. 1 V	17	6* 29 51 V	22	8 14 51 M I
11	1 10 43 M	30	0 33.18 V	21	7 49 34 M		10 41 29 M E
12	7* 40 5 V			24	9 9 19 V	29	0 16 21 V I
14	2 9 26 V			28	10 29 14 M		[illegible] 43 58 V E
16	8 38 46 M						
18	3 8 7 M						
19	9 37 29 V						

IV. Sat. ♂	
10	5 12 46 M
26	11 20 7 V

OCTOBER. ☉

Dies Astronomicus.	Dies mensis civilis.	Dies hebdomadæ.	OCTOBER.	Tempus medium meridiei veri. ☉ H. M. S. D.	Decrementum diurnum temporis medii S. D.	Distantia ☉ ♈ a Meridiano H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ☉ vero. M. S. D.
274	1	Mart.	S. Remigius.	23.49.44. 8	18. 9	11 31 22 5	3 37 6
275	2	Merc.	S. Leodeg.	23.49.25. 9	18. 6	11 27 44 9	3 37 8
276	3	Jov.	S. Candidus.	23.49. 7. 3	18. 3	11 24 7 1	3 38 2
277	4	Ven.	S. Franc. Ser.	23.48.49. 0	18. 0	11 20 28 9	3 38 5
278	5	Sab.	S. Placidus.	23.48.31. 0	17. 7	11 16 50 4	3 38 9
279	6	*F. Dom*	18 *F. SS. Rof.*	23.48.13. 3	17. 3	11 13 11 5	3 39 2
280	7	Lun.	S. Serg. & Soc.	23.47.56. 0	16. 8	11 9 32 3	3 39 6
281	8	Mart.	S. Birgitta.	23.47.39. 2	16. 4	11 5 52 7	3 40 2
282	9	Merc.	SS. Dion. &S.	23.47.22. 8	16. 0	11 2 12 5	3 40 5
283	10	Jov.	S. Franc. B.	23.47. 6. 8	15. 6	10 58 32 0	3 41 0
284	11	Ven.	S. Burchard.	23.46.51. 2	15. 1	10 54 51 0	3 41 5
285	12	Sab.	S. Maximil.	23.46.36. 1	14. 5	10 51 9 5	3 41 9
286	13	*F. Dom*	19 S. Coloman.	23.46.21. 6	13. 9	10 47 27 6	3 42 6
287	14	Lun.	S. Callistus.	23.46. 7. 7	13. 3	10 43 45 0	3 43 2
288	15	Mart.	S. Theresia.	23.45.54. 4	12. 8	10 40 1 8	3 43 6
289	16	Merc.	S. Gallus.	23.45.41. 6	12. 3	10 36 18 2	3 44 2
290	17	Jov.	S. Hedwigis.	23.45.29. 3	11. 8	10 32 34 0	3 44 7
291	18	Ven.	S. Luc. Ev.	23.45.17. 5	11. 1	10 28 49 3	3 45 6
292	19	Sab.	S. Ferdinand.	23.45. 6. 4	10. 3	10 25 3 7	3 46 2
293	20	*F. Dom*	20 S. Felician.	23.44.56. 1	9. 6	10 21 17 5	3 46 9
294	21	Lun.	S. Ursula.	23.44.46. 5	9. 0	10 17 30 6	3 47 6
295	22	Mart.	S. Cordula.	23.44.37. 5	8. 3	10 13 43 0	3 48 2
296	23	Merc.	S. Joan. Cap.	23.44.29. 2	7. 7	10 9 54 8	3 48 8
297	24	Jov.	S. Raphael.	23.44.21. 5	7. 1	10 6 6 0	3 49 4
298	25	Ven.	S. Crispin.	23.44.14. 4	6. 4	10 2 16 6	3 50 3
299	26	Sabb.	S. Evaristus.	23.44. 8. 0	5. 7	9 58 26 3	3 50 9
300	27	*F. Dom*	21 S. Sabina.	23.44. 2. 3	4. 7	9 54 35 4	3 51 8
301	28	Lun.	SS. Sim. &Jud.	23.43.57. 6	3. 9	9 50 43 6	3 52 6
302	29	Mart.	S. Zenobius.	23.43.53. 7	3. 2	9 46 51 0	3 53 3
303	30	Merc.	S. Germanus	23.43.50. 5	2. 6	9 42 57 7	3 54 0
304	31	Jov.	S. Wolfgang. †	23.43.47. 9		9 39 3 7	

OCTOBER ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♎ G.	M.	S.	Motus horarius verus. M.	S.	Ascensio recta. G.	M.	S.	Ascensio recta conversa. H.	M.	S.	D.	Declinatio vera Australis G.	M.	S.	Altitudo Centri ☉ vera. G.	M.	S.
1	7	47	36	2. 27	7	187	9	23	12	28	33	5	3	5	43	38	41	41
2	8	46	42	2. 27	8	188	3	46	12	32	15	1	3	29	3	38	18	21
3	9	45	50	2. 27	9	188	58	14	12	35	52	9	3	52	20	37	55	4
4	10	45	0	2. 28	0	189	52	47	12	39	31	1	4	15	34	37	31	50
5	11	44	11	2. 28	1	190	47	24	12	43	39	6	4	38	45	37	8	39
6	12	43	24	2. 28	2	191	42	7	12	46	48	5	5	1	53	36	45	31
7	13	42	40	2. 28	3	192	36	55	12	50	27	7	5	24	57	36	22	27
8	14	41	58	2. 28	4	193	31	50	12	54	7	3	5	47	57	35	59	27
9	15	41	18	2. 28	5	194	26	52	12	57	47	5	6	10	54	35	36	30
10	16	40	40	2. 28	5	195	22	0	13	1	28	0	6	33	45	35	13	39
11	17	40	4	2. 28	6	196	17	14	13	5	9	0	6	56	30	34	50	54
12	18	39	30	2. 28	7	197	12	36	13	8	50	5	7	19	10	34	28	14
13	19	38	59	2. 28	8	198	8	7	13	12	32	4	7	41	43	34	5	41
14	20	38	30	2. 28	9	199	3	46	13	16	15	0	8	4	11	33	43	13
15	21	38	3	2. 29	0	199	59	33	13	19	58	2	8	26	33	33	20	54
16	22	37	37	2. 29	0	200	55	27	13	23	41	8	8	48	47	32	58	37
17	23	37	13	2. 29	1	201	51	30	13	27	26	0	9	10	52	32	36	32
18	24	36	53	2. 29	2	202	47	42	13	31	10	7	9	32	50	32	14	34
19	25	36	36	2. 29	3	203	44	5	13	34	56	3	9	54	41	31	52	43
20	26	36	21	2. 29	4	204	40	38	13	38	42	5	10	16	25	30	30	59
21	27	36	8	2. 29	4	205	37	21	13	42	29	4	10	37	56	30	9	28
22	28	35	58	2. 29	5	206	34	15	13	46	17	0	10	59	19	29	48	5
23	29	35	50	2. 29	6	207	31	18	13	50	5	2	11	20	33	29	26	51
24	0 ♏	35	43	2. 29	6	208	28	30	13	53	54	0	11	41	36	29	5	48
25	1	35	37	2. 29	7	209	25	51	13	57	43	4	12	2	29	28	44	55
26	2	35	33	2. 29	8	210	23	26	14	1	33	7	12	23	10	28	24	14
27	3	35	31	2. 29	9	211	21	9	14	5	24	6	12	43	40	28	3	44
28	4	35	33	2. 30	0	212	19	6	14	9	16	4	13	3	58	27	43	26
29	5	35	36	2. 30	1	213	17	14	14	13	9	0	13	24	4	27	23	20
30	6	35	41	2. 30	1	214	15	34	14	17	2	3	13	43	57	27	3	27
31	7	35	46	2. 30	2	215	14	4	14	20	56	3	14	3	37	26	43	47

OCTOBER. ☉

Dies Mensis.	Solis in Meridiano versantis. Diameter ☉ apparens.			Mora transitus disci ☉ per Meridianum.			Distantia ☉ à ♁ cujus Distantia media.	Ortus centri ☉ verus.		Occasus centri ☉ verus.	
	M.	S.	D.	M.	S.	D.	10000.	H.	M.	H.	M.
1	32	5	4	2	8	5	10002	18	16	5	44
2	32	5	9	2	8	6	9999	18	17	5	43
3	32	6	5	2	8	7	9996	18	19	5	41
4	32	7	0	2	8	8	9994	18	20	5	40
5	32	7	6	2	9	0	9991	18	22	5	38
6	32	8	1	2	9	1	9988	18	24	5	36
7	32	8	7	2	0	2	9985	18	25	5	35
8	32	9	2	2	9	3	9982	18	27	5	33
9	32	9	8	2	9	5	9979	18	29	5	31
10	32	10	3	2	9	6	9976	18	30	5	30
11	32	10	9	2	9	7	9973	18	32	5	28
12	32	11	4	2	9	8	9971	18	34	5	26
13	32	12	0	2	10	0	9968	18	36	5	24
14	32	12	5	2	10	2	9965	18	38	5	22
15	32	13	1	2	10	3	9962	18	39	5	21
16	32	13	6	2	10	5	9959	18	41	5	19
17	32	14	1	2	10	7	9957	18	43	5	17
18	32	14	6	2	10	8	9954	18	45	5	15
19	32	15	2	2	11	0	9951	18	46	5	14
20	32	15	7	2	11	2	9948	18	48	5	12
21	32	16	2	2	11	4	9946	18	50	5	10
22	32	16	8	2	11	5	9943	18	52	5	8
23	32	17	3	2	11	7	9940	18	53	5	7
24	32	17	8	2	11	9	9938	18	55	5	5
25	32	18	4	2	12	1	9935	18	56	5	4
26	32	18	9	2	12	3	9932	18	58	5	2
27	32	19	4	2	12	6	9929	19	0	5	0
28	32	19	9	2	12	8	9927	19	1	4	59
29	32	20	4	2	13	0	9924	19	3	4	57
30	32	21	0	2	13	2	9921	19	4	4	56
31	32	21	5	2	13	5	9919	19	6	4	54

Dies Mensis.	Phænomena & Observationes. ☉
1	☉ in distant. med.
4	☉ in parall. ε Ophiu. c. h. 3. m. 27.
7	☉ in parall. h Erid. culm. h. 16. m. 54
10	☉ in Parall. β ♒ culm. h. 8. m. 18.
15	☉ in parall. Rigel culm. h. 15. m. 43.
18	☉ in parall. κ Orionis culm. h. 16. m. 4.
20	☉ in parall. ε Erid. culm. h. 13. m. 43.
23	Ingressus ☉ in ♏ h. 9. m. 42.
	☉ in parall. η Ceti culm. h. 11. m. 0.
27	☉ in parall. ε Ceti c. h. 12. m. 22.
28	☉ in parall. α ♑ culm. h. 5. m. 56.
31	☉ in parall. γ Erid. culm. h. 13. m. 25.

O C T O B E R. ☽

Loca Lunæ Sole in Meridiano versante.

Dies Mensis.	Longitudo vera ☽ S.	G.	M	S.	Latitudo vera ☽ G.	M.	S.	Declinatio vera ☽ G.	M.	S.	Nodus ☽ ascendens. G.	M.	Diam. ☽ horizontalis. M.	S.	Parallaxis ☽ horizontalis. M.	S.	Tempus culm. ☽ H.	M.
					B			A										
1	♑	14	57	17	0	13	4	22	24	42	12 ♑	3	29	57	54	16	6	49
2		26	48	6	1	15	14	19	35	23	12	0	29	44	54	27	7	36
3	♒	8	47	11	2	14	36	15	54	59	11	57	29	54	54	47	8	22
4		20	59	39	3	8	59	11	31	45	11	54	30	10	55	16	9	7
5	♓	3	29	8	3	55	23	6	34	50	11	50	30	30	55	52	9	51
6		16	18	27	4	31	8	1	14	36	11	47	30	51	56	32	10	36
								B										
7		29	28	31	4	53	36	4	16	42	11	44	31	13	57	12	11	22
8	♈	12	57	38	5	0	26	9	43	53	11	41	31	35	57	51	12	11
9		26	44	15	4	50	10	14	49	36	11	38	31	53	58	24	13	3
10	♉	10	43	44	4	22	22	19	12	32	11	34	32	7	58	50	13	58
11		24	51	51	3	38	3	22	31	44	11	31	32	17	59	9	14	58
12	♊	9	3	55	2	40	43	24	28	55	11	28	32	23	59	20	15	59
13		23	16	46	1	32	51	24	50	28	11	25	32	25	59	23	17	0
14	♋	7	26	58	0	19	1	23	34	24	11	22	32	23	59	19	17	59
					A													
15		21	33	42	0	55	13	20	49	54	11	19	32	18	59	11	18	55
16	♌	5	35	47	2	6	0	16	51	24	11	15	32	11	58	58	19	48
17		19	32	53	3	8	45	11	59	5	11	12	32	2	58	41	20	38
18	♍	3	23	59	4	0	2	6	32	21	11	9	31	51	58	21	21	26
19		17	7	25	4	36	53	0	50	24	11	6	31	39	57	58	22	13
								A										
20	♎	0	41	35	4	57	7	4	49	2	11	3	31	24	57	31	23	0
21		14	4	7	5	1	1	10	10	24	11	0	31	7	57	1	23	47
22		27	12	54	4	48	37	14	58	32	10	57	30	49	56	28	☌	
23	♏	10	6	10	4	21	36	18	59	45	10	53	30	32	55	56	0	36
24		22	43	40	3	42	2	22	3	6	10	50	30	15	55	26	1	27
25	♐	5	4	53	2	52	42	24	0	6	10	47	30	0	54	57	2	18
26		17	13	8	1	56	8	24	46	43	10	44	29	47	54	34	3	9
27		29	8	29	0	55	15	24	23	4	10	41	29	39	54	19	3	59
					B													
28	♑	10	57	38	0	7	39	22	53	16	10	37	29	35	54	11	4	48
29		22	44	35	1	10	4	20	23	46	10	34	29	36	54	13	5	35
30	♒	4	34	24	2	9	53	17	2	21	10	31	29	43	54	26	6	20
31		16	32	46	3	4	40	12	57	30	10	28	29	55	54	49	7	4

OCTOBER. ☽

Loca Lunæ media nocte.

Longit. vera. ☽ G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
	B		
♑ 20.51.59	0 44 18	29 40	54 30
♒ 2 46.21	1 45 27	29 48	54 36
14.51.32	2 42 33	30 2	55 1
27.12. 8	3 33 22	30 19	55 33
♓ 9.51.17	4 14 45	30 40	56 11
22.50 52	4 44 10	31 2	56 52
♈ 6 10.39	4 59 3	31 24	57 32
19.49. 2	4 57 26	31 44	58 8
♉ 3 42 40	4 38 23	32 0	58 38
17.46 56	4 2 10	32 13	59 1
♊ 1.57.37	3 10 45	32 21	59 16
16 10.22	2 7 19	32 25	59 23
♋ 0.22 21	0 55 37	32 24	59 22
	A		
14.30 48	0 18 46	32 21	59 16
28 35.24	1 31 55	32 15	59 5
♌ 12.35. 1	2 39 8	32 7	58 50
26.29 17	3 36 28	31 57	58 32
♍ 10.16.48	4 20 32	31 45	58 10
23.55.46	4 49 6	31 31	57 45
♎ 7.24.26	5 1 12	31 15	57 16
20.40.18	4 56 44	30 58	56 45
♏ 3 41 31	4 36 48	30 41	56 12
16.26.47	4 3 13	30 24	55 41
28.56.17	3 18 25	30 7	55 11
♐ 11.10. 1	2 25 10	29 52	54 44
23.11.25	1 26 4	29 42	54 25
♑ 5. 3 40	0 23 55	29 36	54 14
	B		
16.51 2	0 39 4	29 35	54 11
28.38.48	1 40 26	29 39	54 18
♒ 10.32.12	2 38 3	29 48	54 36
22.36.52	3 29 29	30 3	55 4

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Characteres fixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Distantia centri ☽ vera in latitudinem. G. M.
2	σ ♑ 6	6 22	1 2 B
	π ♑ 6	10 28	0 46 B
3	18 ♒ 6	15 29	0 34 B
6	9 ♓ 6	7 12	0 22 B
	16 ♓ 6	11 46	0 28 B
10	ζ ♈ 5	14 28	1 5 B
13	H ♊ 4	8 23	1 18 B
	11 ♊ 4	14 17	0 44 B
14	9 ♊ 6	15 17	1 11 B
15	ζ ♋ 5	12 4	0 45 B

OCTOBER.

Dies Mensis	Aetas ☾	Phænomena & Observationes. ☽
1	9	☾ Apogæa et ad χ h e f ω ♐
2	10	☾ ad σ β π ρ ζ ♑
3	11	☾ ad η ϑ ι ζ ♑
4	12	☾ ad ι e ϑ ρ ♒
5	13	☾ ad τ λ h φ ψ ♒
6	14	☾ in Aequatore et ad 14. 16 λ ♓
7	15	☾ ad d δ ♓
8	16	☾ ad e f μ η π ♓
9	17	☾ ad ϑ ξ μ o ♈
10	18	☾ ad π σ ρ ε δ ♈
11	19	☾ ad Plejades δ α ♉
12	20	Lunistitium Bor. et ad β ζ ♉
13	21	☾ ad η μ ν γ ♊
14	22	☾ Perigæa et in nodo desc.
15	23	☾ ad μ ψ ζ λ ♋
16	24	☾ ad α κ ξ ♋
17	25	☾ ad ψ ν π η α
18	26	☾ ad l d c χ τ ♌
19	27	☾ in Aequat. et ad e υ β ♌ β ♍
20	28	☾ ad q f γ ψ ♍
21	29	☾ ad ϑ α l h ♍
22	1	☾ ad κ λ ♍
23	2	☾ ad α ξ ν ζ ♎
24	3	☾ ad π δ β ν ♏
25	4	☾ ad α τ ♏ ω Oph.
26	5	Lunist. aust. et ad ρ ϑ b c Oph.
27	6	☾ in nodo asc. et ad μ δ λ φ ♐
28	7	☾ Apogæa et ad • τ π ♐
29	8	☾ ad σ β π ρ ♑
30	9	☾ ad η ϑ ♑ φ ♒
31	10	☾ ad γ λ ϑ ♑

Dies Mensis	Phænomena & Observationes Planetarum.
1	♂ in distantia media a ☉
3	♅ ad 529 ♍ dist. centr. ♅ 2 gr. 12 m. austr.
4	☿ in Perihelio.
	⚳ in nodo ascendente.
6	☿ in elong. max. occident.
8	⚳ in Quadratura.
12	Conjunctio ♄ & ☉.
	♃ ad 11 Oph. media nocte dist. centr. ♃ 1 gr. 4 m. austr.
14	Conjunctio ☉ et ♅
16	♀ ad δ ♏ h. 14. dist. cent. ♀ o gr. [illegible] m. bor.
17	⚳ ad δ ♊ media nocte dist. cent. ⚳ o gr. 49 m. bor.
21	♃ ad ♀ h. 22. dist. cent. ♃ 2 gr. 2 m. bor.
22	♃ ad ω Oph. media nocte dist. centr. ♃ o gr. 2 m. bor.
24	♄ ad 529 ♍ hor. 5. dist. centr. ♄ o gr. 31 m. austr.
26	♀ in Aphelio.

	Phases Lunæ.
8	Plenilunium hor. 3. m. 17. in ♈ gr. 14. m. 50.
15	Ultimus Quadrans hor. 0. m. 8. in ♋ gr. 21. m. 38.
22	Novilunium h. 2. m. 46 in ♎ gr. 28. m. 43.
30	Primus Quadrans h. 4. min. 29 in ♒ gr. 6 min. 47.

Planetæ in parallelis fixarum.

♅ in radiis solis.
♄ in radiis solis.
♃ 1. ad 15 ε ; deinde δ Lep. 2 μ ♐.
♂ 1. β ♑ 7 δ ♒ 13 ϑ ♑ 19 β ♏ 25 ζ ♑.
♀ 1. β ♑ 7 α Lep. 13 54 Erid. 19 δ ♏ 25 α Corvi.
☿ 1. τ ♌ 7 α Ceti 13 ζ ♍ 19 ζ Serpent. 25 α Hydrae.

OCTOBER.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis planetarum. H.	M.	Longitudo planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H	M.
					♅ *Uranie.*							
1	19	19	0	48	20 ♎	27	0 B	35	7 A	28	6	17
7	18	58	0	27	20	49	0	35	7	36	5	56
13	18	38	0	6	21	11	0	34	7	44	5	34
19	18	18	23	45	21	33	0	34	7	52	5	12
25	17	57	23	24	21	56	0	34	8	0	4	51
					♄ *Saturnus.*							
1	18	59	0	40	17 ♎	45	2 B	16	4 A	52	6	21
7	18	41	0	21	18	29	2	16	5	9	6	1
13	17	24	0	2	19	14	2	16	5	26	5	40
19	17	5	23	42	19	58	2	16	5	42	5	19
25	16	47	23	23	20	41	2	17	5	57	4	59
					♃ *Jupiter.*							
1	23	9	3	35	2 ♐	55	0 B	32	20 A	15	8	1
7	22	53	3	17	3	55	0	31	20	27	7	41
13	22	36	2	59	5	0	0	31	20	39	7	22
19	22	20	2	42	6	10	0	30	20	52	7	4
25	22	4	2	25	7	26	0	29	21	4	6	46
					♂ *Mars.*							
1	21	15	2	6	11 ♏	7	0 A	19	15 A	28	6	57
7	21	16	2	0	15	18	0	22	16	46	6	46
13	21	17	1	55	19	31	0	25	18	1	6	33
19	21	19	1	50	23	45	0	29	19	12	6	21
25	21	20	1	45	28	2	0	33	20	17	6	10
					♀ *Venus.*							
1	21	6	2	2	11 ♏	4	0 A	30	15 A	37	6	58
7	21	32	2	10	16	19	0	49	18	4	6	48
13	21	50	2	17	25	33	1	7	20	14	6	44
19	22	9	2	24	2 ♐	47	1	25	22	6	6	39
25	22	26	2	32	10	0	1	42	23	41	6	33
					☿ *Mercurius.*							
1	16	41	23	1	21 ♍	40	0 B	25	3 B	42	5	21
7	16	40	22	58	25	50	1	36	3	9	5	16
13	17	1	23	6	3 ♎	54	2	0	0	17	5	11
19	17	31	23	18	13	38	1	52	3 A	40	5	5
25	18	3	23	32	23	44	1	24	7	56	5	1

OCTOBER.

Eclipses Satellitum Jovis.

I. Satelles.				II. Satelles.		III. Satelles.	
D. Menf.	Emerfiones. H. M. S.	D. Menf.	Emerfiones. H. M. S.	D. Menf.	Emerfiones. H. M. S.	D. Menf.	H. M. S.
2	7 2 32 M	21	6*22.36 V	1	11 48 56 V	6	4 17 36 V I
4	1 31 49 M	23	0 51 28 V	5	1 8 34 V		6 46 14 V E
5	8 1 2 V	25	7 20.19 M	9	2 28 5 M	13	8 17 58 V I
7	2 30 12 V	27	1 49. 7 M	12	3 47 42 V		10 47 32 V E
9	8 59 21 M	28	8 17.54 V	16	5 7 5 M	21	0 17 39 M I
11	3 28 31 M	30	2 46.37 V	19	6*26 33 V		2 48 11 M E
12	9 57 37 V			23	7 45 41 M	28	4 17 27 M I
14	4 26 41 V			26	9 4 56 V		6 48 46 M E
16	10 55 42 M			30	10 23 44 M		
18	5 14 44 M						
19	11 53 41 V						

IV. Sat.	
13	5 26 34 V
30	11 30 42 M



N O V E M B E R ☉

Dies Astronomicus.	Dies Mensis Civil.	Dies Hebdomad.	NOVEMBER.	Tempus medium meridiei veri ☉ H. M. S. D.	Incrementum diurnum temporis medii. S. D.	Distantia ♈ a Meridiano. H. M. S. D.	Acceleratio stellarum fixarum præ motu ☉ vero. M. S. D.
305	1	*Ven.*	*Fest.OO.SS.*	23.43.46.0	1. 1	9 35. 9. 1	3 55. 5
306	2	Sabb.	Com. o. Fid. d.	23.43.44.9	0. 3	9 31. 13. 8	3 56. 2
307	3	*F. Dom*	22 S. Hubertus.	23.43.44.6	0. 6	9 27. 17. 6	3 57. 3
308	4	Lun.	S. Carolus B.	23.43.45.2	1. 3	9 23. 20. 3	3 57. 9
309	5	Mart.	S. Emericus.	23.43.46.5	2. 1	9 19. 22. 4	3 58. 6
310	6	Merc.	S. Leonard.	23.43.48 6	3. 0	9 15. 23. 8	3 59. 5
311	7	Jov.	S. Engelbert.	23 43.51.6	3. 8	9 11. 24. 3	4 0. 5
312	8	Ven.	S. Godefrid.	23.43.55 4	4. 7	9 7. 23. 8	4 1. 3
313	9	Sabb.	S. Theodor.	23.44. 0.1	5. 7	9 3. 22. 5	4 2. 3
314	10	*F. Dom*	23. S. Andr. Av.	23.44. 5.8	6. 5	8 59. 20. 2	4 3. 1
315	11	Lun.	S. Mart. Ep.	23.44.12.3	7. 3	8 55. 17. 1	4 3. 9
316	12	Mart.	S. Mart. P.	23.44.19 6	8. 3	8 51. 13. 2	4 4. 9
317	13	Merc.	S. Stanisl. K.	23.44.27.9	9. 2	8 47. 8. 3	4 5. 7
318	14	Jov.	S. Jucundus.	23.44.37 1	9. 9	8 43. 2. 6	4 6. 5
319	15	*Ven.*	*S. Leopold.*	23.44.47.0	10. 8	8 38. 56. 1	4 7. 2
320	16	Sabb.	S. Edmund.	23.44.57.8	11. 6	8 34. 48. 9	4 8. 1
321	17	*F. Dom*	24. S. Greg. Th.	23.45. 9.4	12. 3	8 30. 40. 8	4 9. 0
322	18	Lun.	S. Eugenius	23.45.21.7	13. 2	8 26. 31. 8	4 10. 0
323	19	Mart.	S. Elisabetha.	23.45.34.9	14. 1	8 22. 21. 8	4 10. 7
324	20	Merc.	S. Felix Val.	23.45.49.0	15. 0	8 18. 11. 1	4 11. 6
325	21	Jov.	Præf. B.M.V.	23 46. 4.0	15. 9	8 13. 59. 5	4 12. 3
326	22	Ven.	S. Cæcilia.	23.46.19.9	16. 6	8 9. 47. 2	4 13. 2
327	23	Sabb.	S. Clemens P.	23.46.36.5	17. 3	8 5. 34. 0	4 14. 0
328	24	*F. Dom*	25. S. Joan a Cr.	23.46.53.8	18. 0	8 1. 20 0	4 14. 6
329	25	Lun.	S. Catharina.	23.47.11.8	18. 8	7 57. 5. 4	4 15. 4
330	26	Mart.	S. Conradus.	23 47.30.6	19. 6	7 52. 50. 0	4 16. 3
331	27	Merc.	S. Virgil.	23.47.50.2	20. 4	7 48. 33. 7	4 17 0
332	28	Jov.	S. Sosthen.	23.48.10 6	21. 0	7 44. 16 7	4 17 7
333	29	Ven.	S. Saturninus.	23.48.31.6	21. 6	7 39. 59. 0	4 18 2
334	30	Sabb.	S. Andr. Ap.	23.48.53.2		7 35. 40. 8	

NOVEMBER. ☉

Solis in meridiano versantis.

Dies Mensis.	Longitudo vera. ♏ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa H. M. S. D.	Declinatio vera Australis. G. M. S.	Altitudo centri ☉ vera. G. M. S.
1	8. 35. 53	2. 30. 3	216.12.45	14.24.50. 9	14.22.52	27. 24 32
2	9. 36. 1	2. 30. 4	217 11.37	14.28.46. 2	14.42. 5	27. 5 19
3	10. 36. 10	2. 30. 5	218 10 41	14.32.42. 4	15. 1. 3	26. 46 21
4	11. 36. 21	2. 30. 5	219. 9.56	14.36.39 7	15.19.55	26. 27 29
5	12. 36 33	2. 30. 6	220. 9.24	14.40.37. 6	15.38 21	26. 9 3
6	13. 36. 46	2. 30. 7	221. 9 3	14 44.36. 2	15.56.34	25. 50 50
7	14. 37. 2	2. 30. 8	222. 8.56	14 48.35. 6	16.14.29	25. 32 55
8	15. 37. 21	2. 30. 9	223. 9. 3	14 52.36. 2	16.32.10	25. 15 14
9	16. 37. 43	2. 30. 9	224. 9.23	14 56 37. 5	16 49.33	24. 57 51
10	17. 38. 7	2. 31. 0	225. 9.57	15. 0.39. 8	17. 6.39	24. 40 45
11	18. 38. 32	2. 31. 1	226.10 43	15. 4 42. 9	17.23.29	24. 23 55
12	19 38. 59	2. 31. 2	227 12.42	15. 8.46. 8	17.39.59	24. 7 25
13	20. 39. 27	2. 31. 2	228 12.54	15.12.51. 7	17 56.11	23. 51 13
14	21 39. 57	2. 31. 3	229.14.20	15.16.57. 4	18 12. 5	23. 35 19
15	22. 40. 30	2. 31. 3	230.15.57	15.21. 3. 9	18 27.39	23. 19 45
16	23. 41. 5	2. 31. 4	231.17 47	15 25 11. 1	18 42.52	23. 4 32
17	24. 41. 41	2. 31. 5	232 19.49	15 29.19. 2	18.57 48	32. 49 36
18	25. 42. 17	2. 31. 5	233.22. 4	15.33 28. 2	19 12.24	22. 35 0
19	26. 42. 55	2. 31. 6	234 24.43	15 37.38. 2	19.26.38	22. 20 46
20	27. 43. 35	2. 31. 7	235.27 14	15 41 48. 9	19.40.31	22. 6 53
21	28. 44. 18	2. 31. 7	236 30. 8	15 46. 0. 5	19.54. 2	21. 53 29
22	29. 45. 2	2. 31. 8	237.33.13	15.50.12. 8	20. 7.12	21. 40 12
23	0 ♐ 45 47	2. 31. 9	238.36.30	15.54.26. 0	20.20. 0	21. 27 24
24	1. 46. 33	2. 31. 9	239.39.59	15.58.40. 0	20 32 25	21. 14 59
25	2. 47. 20	2. 32. 0	240.43 49	16. 2.54. 6	20.44 26	20. 2 58
26	3. 48. 8	2. 32. 1	241 47.30	16. 7.10. 0	20.56. 4	19. 51 20
27	4. 49. 0	2. 32. 1	242.51.34	16.11.26. 3	21. 7.19	19. 40 5
28	5. 49. 52	2. 32. 2	243.55 49	16.15.43. 3	21.18 12	19. 29 17
29	6. 50. 44	2. 32. 3	245. 0.14	16 20. 1. 0	21.28.39	19. 18 45
30	7. 51. 36	2. 32. 3	246. 4.47	16.24.19. 2	21.38 40	19. 8 44

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Dies Mensis.	Solis in Meridiano versantis: Diameter ☉ apparens. M.	S.	D.	Mora transitus disci ☉ per meridianum M.	S.	D.	Distantia ☉ a ♁ cujus distant. med. 10000.	Ortus Centri ☉ verus. H.	M.	Occasus centri ☉ verus. H.	M.
1	32	22	0	2	13	7	9916	19	7	4	53
2	32	22	5	2	13	9	9914	19	9	4	51
3	32	23	0	2	14	2	9911	19	11	4	49
4	32	23	5	2	14	4	9909	19	13	4	47
5	32	24	0	2	14	6	9906	19	14	4	46
6	32	24	5	2	14	8	9904	19	16	4	44
7	32	25	0	2	15	1	9901	19	17	4	43
8	32	25	4	2	15	3	9899	19	19	4	41
9	32	25	9	2	15	6	9897	19	20	4	40
10	32	26	3	2	15	8	9894	19	21	4	39
11	32	26	8	2	16	0	9892	19	22	4	38
12	32	27	2	2	16	2	9890	19	24	4	36
13	32	27	7	2	16	5	9888	19	26	4	34
14	32	28	1	2	16	7	9886	19	27	4	33
15	32	28	5	2	17	0	9884	19	28	4	32
16	32	28	8	2	17	2	9882	19	29	4	31
17	32	29	2	2	17	5	9880	19	30	4	30
18	32	29	6	2	17	7	9878	19	31	4	29
19	32	30	0	2	17	9	9876	19	33	4	27
20	32	30	3	2	18	1	9874	19	35	4	25
21	32	30	7	2	18	3	9872	19	36	4	24
22	32	31	0	2	18	6	9870	19	38	4	22
23	32	31	3	2	18	8	9868	19	39	4	21
24	32	31	6	2	19	0	9866	19	40	4	20
25	32	32	0	2	19	2	9865	19	41	4	19
26	32	32	3	2	19	4	9863	19	42	4	18
27	32	32	7	2	19	6	9861	19	43	4	17
28	32	33	0	2	19	9	9860	19	44	4	16
29	32	33	4	2	20	1	9858	19	45	4	15
30	32	33	7	2	20	3	9856	19	40	4	14

Dies Mensis.	Phænomena & Observationes ☉
4	☉ in Parall. β ♑ culm. h. 5. m. 30.
7	☉ in parall. Sirii culm. h. 15. m. 44.
9	☉ in parall. δ ♒ c. h. 7. m. 46.
10	☉ in parall. δ ♑ c. h. 6. m. 34.
	☉ in nodo descend. ♂
11	☉ in parall. γ ♑ culm. h. 6. m. 23.
12	☉ in parall. β Can. maj. c. h. 15. m. 2.
13	☉ in parall. α Leporis c. h. 14. m. 9.
17	☉ in parall. β Ceti culm. h. 9. m. 2.
22	Ingressus ☉ in ♐ h. 5. m. 55.
25	☉ in parall. β Leporis culm. h. 13. m. 15.
28	☉ in parall. ε Corvi culm. h. 19. m. 41.

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Loca Lunæ Sole in Meridiano versante.

Dies Mensis.		Longitudo vera ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Declinatio vera ☽ G. M. S.	Nodus ☽ ascendens G. M.	Diameter ☽ horizontalis. M. S.	Parallaxis ☽ horizontalis. M. S.	Tempus culm. ☽ H. M.
			B	A				
1	♒	28 44 59	3 52 14	8 17 26	10 ♑ 24	30 13	55 22	7 47
2	♓	11 15 51	4 29 54	3 11 12	10 21	30 35	56 2	8 30
				B				
3		24 9 51	4 55 7	2 11 41	10 18	31 1	56 49	9 15
4	♈	7 27 39	5 5 26	7 38 13	10 14	31 28	57 39	10 3
5		21 10 28	4 58 51	12 52 52	10 11	31 55	58 28	10 5[illegible]
6	♉	5 16 2	4 34 11	17 35 41	10 8	32 21	59 16	11 [illegible]
7		19 39 24	3 51 40	21 22 57	10 5	32 37	59 46	12 47
8	♊	4 14 25	2 53 33	23 51 29	10 2	32 49	60 7	13 [illegible]
9		18 53 39	1 43 38	24 43 25	9 59	32 53	60 14	14 [illegible]
10	♋	3 30 56	0 26 59	23 52 9	9 55	32 50	60 9	15 53
			A					
11		18 0 49	0 51 21	21 24 22	9 52	32 41	59 53	16 [illegible]
12	♌	2 19 33	2 5 8	17 38 2	9 49	32 27	59 27	17 [illegible]
13		16 25 22	3 10 20	12 54 40	9 46	32 11	58 57	18 37
14	♍	0 17 31	4 3 14	7 35 24	9 43	31 53	58 24	19 25
15		13 56 16	4 41 27	1 59 49	9 40	31 34	57 49	20 11
				A				
16		27 21 10	5 3 28	3 35 6	9 36	31 16	57 16	20 5[illegible]
17	♎	10 33 4	5 8 53	8 54 44	9 33	30 58	56 44	21 42
18		23 32 18	4 58 19	13 45 50	9 30	30 42	56 14	22 29
19	♏	6 18 41	4 32 30	17 35 19	9 27	30 26	55 46	23 18
20		18 52 34	3 54 38	21 12 38	9 24	30 12	55 19	☌
21	♐	1 14 15	3 5 28	23 27 21	9 21	29 59	54 55	0 [illegible]
22		13 24 57	2 8 38	24 33 47	9 17	29 47	54 34	0 59
23		25 25 20	1 6 41	24 29 51	9 14	29 39	54 18	1 49
24	♑	7 17 55	0 2 11	23 18 7	9 11	29 33	54 7	2 38
			B					
25		19 5 31	1 1 57	21 5 3	9 8	29 30	54 3	3 26
26	♒	0 51 52	2 3 27	17 19 7	9 5	29 33	54 7	4 1[illegible]
27		12 41 5	3 0 3	14 8 30	9 2	29 40	54 20	4 54
28		24 38 2	3 49 31	9 43 [illegible]	8 58	29 52	54 43	5 36
29	♓	6 47 41	4 29 34	4 51 [illegible]	8 55	30 10	55 15	6 18
				B				
30		19 15 15	4 58 18	0 18 59	8 52	30 33	55 57	7 1[illegible]

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Loca Lunæ media nocte.

Dies Mensis.	Longitudo verâ. ☽ S. G. M. S.	Latitudo vera. ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis. M. S.
		B		
1	♓ 4.57.54	4 12 27	30.24	55.41
2	17.39.50	4 44 12	30.48	56.25
3	♈ 0.45.52	5 2 15	31.14	57.14
4	14.16. 2	5 4 18	31.42	58. 4
5	28.10.44	4 48 44	32. 7	58.51
6	♉ 12.25.53	4 15 1	32.29	59.30
7	26.55.49	3 24 18	32.44	59.58
8	♊ 11.33.51	2 19 45	32.51	60.12
9	26.12.50	1 5 46	32.52	60.13
		A		
10	♋ 10.47. 0	0 12 19	32.46	60. 2
11	25.11.42	1 28 56	32.35	59.41
12	♌ 9.24. 6	2 39 2	32.19	59.13
13	23.23.11	3 38 29	32. 2	58.41
14	♍ 7. 8.31	4 24 16	31.43	58. 6
15	20.40.30	4 54 30	31.24	57 32
16	♎ 3.58.41	5 8 13	31. 7	57. 0
17	17. 4.15	5 5 29	30.50	56.29
18	29 57. 5	4 47 14	30.34	56. 0
19	♏ 12.37. 9	4 15 2	30.19	55.32
20	25. 4.53	3 31 20	30. 5	55. 7
21	♐ 7.20 52	2 37 48	29.53	54.44
22	19 26.19	1 38 9	29.42	54.26
23	♑ 1.22.23	0 34 35	29.35	54.18
		B		
24	13.12. 7	0 30 5	29.31	54. 4
25	24.58.35	1 33 10	29.31	54. 4
26	♒ 6.35.50	2 32 31	29 35	54.12
27	18 38 16	3 25 48	29.45	54.30
28	♓ 0.41. 0	4 10 51	30. 0	54.58
29	12.58.58	4 45 23	30.20	55.35
30	25.37.12	5 7 16	30.46	56.21

Congress. ☽ cum fixis & Planet

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitudinem. H. M.	Distantia centri vera in latitudine. G. M.
1	κ ♒ 5	15 22	0 9 B
2	κ ♓ 5	16 41	0 22 B
6	μ ♈ 6	10 39	0 15 B
11	ζ ♋ 5	17 46	0 30 B
15	e ♌ 4	13 47	0 46 B
26	ρ ♑ 6	3 15	0 58 B
27	18 ♒ 6	7 58	0 1 B
30	16 ♓ 6	6 33	1 48 B
	19 ♓ 6	11 54	0 34 B

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Mens.	Aetas ☾	Phænomena & Observationes ☽.
1	11	☾ ad ϑ ρ σ κ ♒
2	12	☾ in Aequatore ad ψ χ ♒ κ λ ♓
3	13	☾ ad 27. 29. 33 ♓
4	14	☾ ad δ ε e f μ ♓
5	15	☾ ad η π ν o ♓
6	16	☾ ad μ o π σ ξ ♈
7	17	☾ ad Plej.
8	18	☾ ad ε ϑ α τ ♉
9	19	Lunist. bor. ad β ζ ♉ H η μ ♊
10	20	☾ in no. desc et ad γ ε ζ δ ♊
11	21	☾ Perigæ et ad κ γ φ ♊ μ ψ ζ ♋
12	22	☾ ad γ δ α χ ♋
13	23	☾ ad ξ o υ π η ♌
14	24	☾ ad ρ k ι c χ ♌
15	25	☾ in Aequat. et ad σ τ e υ ♌
16	26	☾ ad η g f γ ♍
17	27	☾ ad ψ g ϑ α ♍
18	28	☾ ad κ λ ♍
19	29	☾ ad μ α ξ ν ♎
20	30	☾ ad ζ γ κ η ϑ ♎
21	1	☾ ad ν σ α τ ♏
22	2	Lunistitium australe ad A ρ ϑ b Oph
23	3	☾ ad γ μ δ λ ♐
24	4	☾ in nodo ascend. et ad σ ο τ π ♐
25	5	☾ Apogæa et ad e f ω A ♐
26	6	☾ ad β ψ η ϑ ♑
27	7	☾ ad ε γ λ δ ♑
28	8	☾ ad ϑ ρ σ ♒
29	9	☾ in Aequat. et ad λ h φ ψ ♒
30	10	☾ ad λ 19. 21 ♓

D. Mens.	Phænomena & Observationes Planetarum.
1	♀ ad ϑ Oph. hor. 6. dist. cent. ♀ o gr. [illegible] min. austr.
3	⛢ ad h ♍ h. 18. dist. cent. ⛢ o gr. 58 [illegible] bor.
6	Conjunctio superior ☉ et ☿
7	☿ in nodo asc.
11	♂ ad ♃ h. 9. dist. cent. ♂ 1 gr. 9 m. austr.
13	♀ ad λ ♐ h. 20. dist. cent. ♀ 0 gr. 13 [illegible] austr.
16	♄ ad ⛢ med. nocte dist. cent. ♄ 1 gr. [illegible] m. bor.
	♀ in latitud. austr. max.
17	☿ in Aphelio.
19	♀ ad σ ♐ in merid. dist. cent. ♀ o gr. [illegible] min. bor.
23	♄ ad m ♍ in meridie dist. cent. ♄ [illegible] gr. 35 m. bor.
	♀ ad ψ ♐ in merid. dist. cent. ♀ o [illegible] 23 min. bor.
29	⛢ ad m ♍ dist. centr. ⛢ 1 gr. 9 m. austr.

	Phases Lunæ.
8	Plenilunium h. 15. m. 1. in ♉ gr. 14. min. 14.
13	Ultimus Quadrans h. 7. m. 51. in ♌ gr. 20. min. 59.
20	Novilunium h. 18. m. 41 in ♏ gr. 28 m. 31.
29	Primus Quadrans h. 6 m. 7 in ♓ gr. 6. m. 51.

Planetæ in parallelis fixarum.

⛢ mense toto Rigel.
♄ sub init. β ♒ ad finem φ ♒
♃ sub initium ε Corvi, deinde in radiis [illegible]
♂ 1. τ ♐ 7 δ ♏ 13 1 ν ♐ 19 α Corvi [illegible] β Oph.
♀ 1 σ ♏ 7 π ♏ 13 α ♏ 19 π ♏ 25 σ ♏
☿ 1 λ ♍ 7 4 ζ ♎ 13 d ♐ 19 δ ♏ 25 β Oph.

NOVEMBER.

Dies Mensis.	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis Planetarum. H.	M.	Longitudo Planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H.	M.
					♅ *Uranie.*							
1	17	33	22	59	22 ♎	22	0 B	34	8 A	11	4	25
7	17	11	22	36	22	44	0	34	8	19	4	1
13	16	48	22	13	23	5	0	34	8	26	3	38
19	16	26	21	50	23	25	0	34	8	34	3	14
25	16	3	21	26	23	44	0	35	8	41	2	49
					♄ *Saturnus.*							
1	17	24	22	58	21 ♎	32	2 B	17	6 A	17	4	32
7	17	3	22	36	22	13	2	17	6	32	4	9
13	16	43	22	15	22	55	2	18	6	47	3	47
19	16	22	21	53	23	35	2	18	7	0	3	24
25	16	2	21	32	24	15	2	19	7	14	3	2
					♃ *Jupiter.*							
1	21	45	2	4	8 ♐	51	0 B	28	21 A	21	6	23
7	21	27	1	45	10	7	0	27	21	32	6	3
13	21	9	1	26	11	22	0	27	21	43	5	43
19	20	50	1	6	12	38	0	26	21	54	5	22
25	20	31	0	46	13	55	0	25	22	5	5	1
					♂ *Mars.*							
1	21	20	1	39	3 ♐	6	0 A	37	21 A	24	5	58
7	21	20	1	34	7	28	0	40	22	13	5	48
13	21	19	1	28	11	53	0	43	22	57	5	37
19	21	17	1	23	16	20	0	46	23	32	5	29
25	21	14	1	17	20	50	0	48	23	57	5	20
					♀ *Venus.*							
1	22	46	2	44	18 ♐	24	1 A	58	24 A	56	6	42
7	22	58	2	52	25	30	2	11	25	34	6	46
13	23	7	2	59	2 ♑	36	2	21	25	48	6	51
19	23	11	3	5	9	39	2	28	25	34	6	59
25	23	14	3	11	16	39	2	31	24	56	7	8
					☿ *Mercurius.*							
1	18	43	23	49	5 ♏	23	0 B	40	12 A	42	4	55
7	19	14	0	2	15	6	0	0	16	24	4	50
13	19	46	0	16	24	38	0 A	39	19	35	4	46
19	20	15	0	30	4 ♐	0	1	15	22	12	4	45
25	20	41	0	44	13	16	1	46	24	10	4	47

Jupiter vicinus Soli, hinc Satellites obſervari nequeunt.

DECEMBER. ⊙

Dies Astronomicus.	Dies mensis civilis.	Dies hebdomadæ	DECEMBER.	Tempus medium meridie veri. ⊙ H. M. S. D.	Incrementum diurnum temporis medii. S. D.	Distantia. ⊙ ♈ a Meridiano. H. M. S. D.	Acceleratio diurna stellarum fixarum præ motu ⊙ vero. M. S. D.
335	1	*F. Dom*	1*Adv*. S. Eligius	23.49.15.5	22 9	7. 31.22. 0	4 19 5
336	2	Lun.	S. Bibiana.	23.49.38.4	23 5	7. 27. 2. 5	4 20 0
337	3	Mart.	S. Franc. Xav.	23 50. 1.9	24 0	7. 22.42. 5	4 20 7
338	4	Merc.	S. Barbara †	23.50.25.9	24 6	7. 18.21. 8	4 21 2
339	5	Iov	S. Sabbas.	23.50.50.5	25 0	7. 14. 0. 6	4 21 8
340	6	Ven.	S. Nicolaus. †	23.51.15.5	25 7	7. 9.38. 8	4 22 3
341	7	Sabb.	S. Ambros. †	23.51.41.2	26 2	7. 5.16. 5	4 22 9
342	8	*F. Dom*	2*Adv Conc.BVM.*	23.52. 7.4	26 8	7. 0.53. 6	4 23 4
343	9	Lun.	S. Leocadia.	23.52.34.2	27 3	6. 56.30. 2	4 23 9
344	10	Mart.	S. Juditha.	23.53. 1.5	27 7	6. 52. 6. 3	4 24 2
345	11	Merc.	S. *Damasus* †	23 53.29.2	27 9	6. 47.42. 1	4 24 6
346	12	Jov.	S. Synesius.	23.53.57.1	28 2	6. 43.17. 5	4 24 9
347	13	Ven.	S. Lucia. †	23.54.25.3	28 6	6. 38.52. 6	4 25 2
348	14	Sab.	S. Spiridion	23.54.53.9	29 0	6. 34 27. 4	4 25 6
349	15	*F. Dom*	3*Adv*. S.Irenæus	23.55 22 9	29 3	6. 30. 1. 8	4 26 0
350	16	Lun.	S. Eusebius	23.55.52 2	29 5	6. 25.35. 6	4 26 3
351	17	Mart.	S. Lazarus.	23.56.21 7	29 9	6. 21. 9. 5	4 26 4
352	18	Merc.	Quat. Temp. †	23.56.51.6	29 9	6. 16.43. 1	4 26 6
353	19	Jov.	S. Nemesius	23 57.21.5	30 0	6. 12.16. 5	4 26 6
354	20	Ven.	S. Amon †	23.57.51.5	30 1	6. 7.49. 9	4 26 7
355	21	Sabb.	S. Thom.Ap. †	23.58.21.6	30 2	6. 3.23. 2	4 26 8
356	22	*F. Dom*	4*Adv*.S.ZenoM.	23.58.51.8	30 2	5. 58.56. 4	4 26 8
357	23	Lun.	S. Victoria	23.59.22 0	30 2	5. 54.29. 6	4 26 8
358	24	Mart.	S. Ad. & Eva †	23.59.52.2	30 1	5. 50. 2. 8	4 26 7
359	25	*Merc.*	*Nat.D.N.J.C.*	0. 0.22.3	29 9	5. 45.36. 1	4 26 7
360	26	*Jov.*	*S.Steph.Pr.M.*	0. 0 52.2	29 9	5. 41. 9. 4	4 26 5
361	27	Ven.	S. Joan. Ev.	0. 1.22.1	29 7	5. 36.42. 9	4 26 4
362	28	Sabb.	SS. Innoc. M.	0. 1.51.8	29 5	5. 32.16. 5	4 26 1
363	29	*F. Dom*	S. Thom. Can.	0. 2.21.3	29 3	5. 27.50. 4	4 25 9
364	30	Lun.	S. David Rex.	0. 2.50.6	28 9	5. 23.24. 5	4 25 6
365	31	Mart.	S. Silvester	0. 3.19.5		5. 18.58. 9	

DECEMBER. ☉

Solis in Meridiano versantis.

Dies Mensis.	Longitudo vera ♐ G. M. S.	Motus horarius verus. M. S.	Ascensio recta. G. M. S.	Ascensio recta conversa. H. M. S. D.	Declinatio vera Australis G. M. S.	Altitudo Centri ☉ vera. G. M. S.
1	8. 52. 29	2. 32. 4	247 9 31	16.28.38. 0	21 48 18	19 59. 6
2	9. 53. 23	2. 32. 4	248 14 23	16 32.51. 5	21 57 30	19 49 54
3	10 54 17	2. 32. 5	249 19 23	16.37.17. 5	22 6 17	19 41. 7
4	11. 55. 12	2. 32. 5	250 24 34	16.41.38. 2	22 14 39	19 32.45
5	12. 56. 8	2. 32. 5	251 29 52	16.45 59. 4	22 22 34	19.24.50
6	13. 57. 6	2. 32. 6	252 35 18	16.50.51. 2	22 30 0	19.17.24
7	14. 58. 5	2. 32. 6	253 40 53	16.54 43. 5	22 37 3	19.10.21
8	15. 59. 5	2. 32. 6	254 46 36	16 59. 6. 4	22 43 40	19. 3.44
9	17. 0. 6	2. 32. 6	255 52 27	17. 3.29. 8	22 49 48	18.57 36
10	18. 1. 8	2. 32. 7	256 58 25	17. 7.53. 7	22 55 25	18.51.59
11	19. 2. 11	2. 32. 7	258 4 29	17.12.17. 9	23 0 35	14.46.49
12	20. 3. 14	2. 32. 7	259 10 38	17.16.42. 5	23 5 30	18.41 54
13	21. 4. 18	2. 32. 7	260 16 51	17.21. 7. 4	23 9 54	18.37.30
14	22. 5. 23	2. 32. 7	261 23 9	17.25.32. 6	23 13 46	18 33.38
15	23. 6. 29	2. 32. 7	262 29 33	17.29.58. 2	23 17 10	18.30.14
16	24. 7. 36	2. 32. 7	263 36 3	17.34.24. 2	23 20 7	18.27.17
17	25 8. 45	2. 32. 8	264 42 37	17 38 50. 5	23 22 36	18.23.48
18	26 9. 55	2. 32. 8	265 49 14	17.43.16. 9	23 24 37	18.22.47
19	27. 11. 5	2. 32 8	266 55 52	17 47.43. 5	23 26 9	18.21.15
20	28 12. 15	2. 32. 8	268 2 31	17 52.10. 1	23 27 12	18.20.12
21	29 13. 25	2. 32. 8	269 9 12	17.56 36. 8	23 27 49	18 19.35
22	0 ♑ 14. 36	2. 32. 8	270 15 54	18. 1. 3. 6	23 27 57	18 19 27
23	1. 15. 48	2. 32. 8	271 22 37	18. 5.30. 4	23 27 36	18 19 48
24	2. 17. 1	2. 32. 9	272 29 18	18. 9.57. 2	23 26 47	18.20.34
25	3. 18. 13	2. 32. 9	273 35 59	18.14.23. 9	23 25 31	18.21.[illegible]3
26	4. 19 24	2. 32. 9	274 42 39	18 18 50. 6	23 23 44	18.23 40
27	5. 20. 36	2 32. 9	275 49 17	18 23 17. 1	23 21 29	18 25 55
28	6. 21. 48	2. 32. 9	276 55 52	18 27 43. 5	23 18 47	18 28 37
29	7. 22. 59	2. 32. 9	278 2 24	18.32. 9. 6	23 15 39	18.31.45
30	8. 24. 10	2. 32. 9	279 8 52	18.36.35. 5	23 12 2	18.35.22
31	9. 25. 21	2. 32. 9	280 15 16	18.41. 1. 1	23 7 55	18.39.29

DECEMBER. ☉

Dies Mensis.	Solis in Meridiano versantis. Diameter ☉ apparens. M. S. D.	Mora transitus disci ☉ per Meridianum. M. S. D.	Distantia ☉ à ♁. cujus Distantia media. 10000.	Ortus centri ☉ verus. H. M.	Occasus centri ☉ verus. H. M.
1	32 34 1	2 20 5	9855	19 47	4 13
2	32 34 3	2 20 6	9853	19 48	4 12
3	32 34 6	2 20 7	9852	19 49	4 11
4	32 34 8	2 20 9	9850	19 49	4 11
5	32 35 1	2 21 0	9849	19 50	4 10
6	32 35 3	2 21 1	9848	19 50	4 10
7	32 35 6	2 21 2	9846	19 51	4 9
8	32 35 8	2 21 3	9845	19 52	4 8
9	32 36 0	2 21 4	9844	19 52	4 8
10	32 36 3	2 21 5	9843	19 53	4 7
11	32 36 5	2 21 6	9842	19 53	4 7
12	32 36 7	2 21 7	9841	19 54	4 6
13	32 36 9	2 21 8	9840	19 54	4 6
14	32 37 0	2 21 9	9840	19 55	4 5
15	32 37 2	2 21 9	9839	19 55	4 5
16	32 37 3	2 22 0	9838	19 56	4 4
17	32 37 5	2 22 1	9838	19 56	4 4
18	32 37 6	2 22 1	9837	19 56	4 4
19	32 37 8	2 22 2	9836	19 56	4 4
20	32 37 9	2 22 2	9836	19 56	4 4
21	32 38 0	2 22 2	9835	19 56	4 4
22	32 38 9	2 22 2	9835	19 56	4 4
23	32 38 1	2 22 2	9834	19 56	4 4
24	32 38 2	2 22 2	9834	19 56	4 4
25	32 38 3	2 22 2	9833	19 56	4 4
26	32 38 4	2 22 2	9833	19 56	4 4
27	32 38 4	2 22 2	9833	19 56	4 4
28	32 38 5	2 22 1	9832	19 56	4 4
29	32 38 5	2 22 1	9832	19 55	4 5
30	32 38 6	2 22 1	9832	19 55	4 5
31	32 38 6	2 22 0	9832	19 55	4 5

Dies Mensis.	Phænomena & Observationes. ☉
2	☉ in parall. γ Hydræ c. h. 20. m. 32.
5	☉ in parall. γ Leporis c. h. 12. m. 48.
	☉ in nodo descend. ☿
6	☉ in nodo descend. ♀
16	☉ in parall. α Corvi culm. h. 18. m. 20.
	☉ in parall. ζ ♑ culm. h. 3. m. 40.
21	Ingressus ☉ in ♑ h. 18. m. 16.
29	☉ in nodo descend. ♃.
31	☉ Perigæus.

DECEMBER. ☽

Loca Lunæ Sole in Meridiano verſante.

Dies Menſis.	Longitudo vera ☽				Latitudo vera ☽			Declinatio vera ☽			Nodus ☽ aſcendens.		Diam. ☽ horizontalis.		Parallaxis ☽ horizontalis.		Tempus culm. ☽	
	S.	G.	M	S.	G.	M.	S.	G.	M.	S.	G.	M.	M.	S.	M.	S.	H.	M.
						B			B									
1	♈	2	5	0	5	12	21	5	36	12	8 ♑	49	31	0	56	47	7	45
2		15	20	30	5	11	33	10	49	55	8	46	31	30	57	43	8	33
3		29	3	23	4	52	55	15	42	35	8	43	32	2	58	41	9	25
4	♉	13	13	29	4	15	58	19	53	21	8	40	32	31	59	35	10	20
5		27	47	23	3	21	41	22	57	51	8	36	32	56	60	19	11	20
6	♊	12	39	24	2	12	42	24	32	3	8	33	33	12	60	50	12	25
7		27	41	21	0	53	37	24	20	22	8	30	33	19	61	3	13	29
						A												
8	♋	12	43	39	0	28	40	22	22	54	8	27	33	17	60	59	14	30
9		27	39	2	1	49	19	18	52	7	8	24	33	5	60	37	15	27
10	♌	12	20	3	3	1	18	14	13	9	8	21	32	47	60	3	16	22
11		26	41	34	4	0	7	8	51	56	8	17	32	23	59	20	17	12
12	♍	10	42	23	4	42	57	3	11	42	8	14	31	57	58	33	17	59
									A									
13		24	21	22	5	8	33	2	28	42	8	11	31	31	57	45	18	45
14	♎	7	39	41	5	16	49	7	53	25	8	8	31	7	57	0	19	30
15		20	39	10	5	8	30	12	49	55	8	5	30	45	56	19	20	16
16	♏	3	22	2	4	45	11	17	6	37	8	2	30	25	55	44	21	4
17		15	50	39	4	8	32	20	33	42	7	58	30	8	55	13	21	53
18		28	7	11	3	21	12	23	1	54	7	55	29	55	54	48	22	43
19	♐	10	13	58	2	25	8	24	24	10	7	52	29	44	54	28	23	33
20		22	12	53	1	23	10	24	37	16	7	49	29	36	54	13	☌	
21	♑	4	5	43	0	18	11	23	42	21	7	46	29	30	54	2	0	22
						B												
22		15	54	41	0	47	22	21	44	34	7	43	29	27	53	57	1	10
23		27	41	25	1	50	42	18	50	18	7	39	29	28	53	58	1	56
24	♒	9	29	25	2	49	27	15	10	28	7	36	29	31	54	4	2	40
25		21	20	52	3	41	12	10	54	28	7	33	29	38	54	16	3	22
26	♓	3	19	29	4	23	49	6	11	45	7	30	29	49	54	38	4	2
27		15	29	10	4	55	24	1	11	9	7	27	30	6	55	8	4	43
									B									
28		27	53	53	5	13	58	3	57	44	7	24	30	27	55	46	5	26
29	♈	10	37	56	5	17	52	9	4	51	7	20	30	52	56	34	6	11
30		23	45	7	5	5	33	13	57	21	7	17	31	22	57	28	6	59
31	♉	7	18	4	4	36	6	18	18	31	7	14	31	54	58	26	7	50

DECEMBER. ☽

Loca Lunæ media nocte.

Dies Mensis.	Longit. vera. ☽ S. G. M. S.	Latitudo vera ☽ G. M. S.	Diameter ☽ horizontalis. M. S.	Parallaxis. ☽ horizontalis M. S.
		B		
1	♈ 8.39 27	5 14 12	31 14	57 14
2	22 8.37	5 4 34	31 46	58 12
3	♉ 6. 5.15	4 36 36	32 17	59 9
4	20.27.51	3 50 48	32 44	59 58
5	♊ 5.11.37	2 48 43	33 5	60 36
6	20. 9 39	1 34 5	33 17	60 59
7	♋ 5 12 58	0 12 27	33 19	60 3
		A		
8	20 12.33	1 9 27	33 12	60 50
9	♌ 5 1 37	2 26 43	32 57	60 22
10	19 33 24	3 32 30	32 36	59 43
11	♍ 3 44.45	4 23 37	32 11	58 57
12	17 34 31	4 57 55	31 45	58 9
13	♎ 1. 3 1	5 14 48	31 19	57 22
14	14.11 39	5 14 38	30 55	56 39
15	27. 2 33	4 58 36	30 35	56 1
16	♏ 9.37 59	4 28 25	30 17	55 28
17	22 0 18	3 46 2	30 1	55 0
18	♐ 4.11 39	2 54 7	29 49	54 37
19	16 14.17	1 54 43	29 40	54 20
20	28. 9 55	0 50 53	29 33	54 7
		B		
21	♑ 10. 0.33	0 14 40	29 28	53 59
22	21.48.17	1 19 28	29 27	53 57
23	♒ 3 35. 0	2 20 26	29 29	54 0
24	15.24.36	3 16 20	29 34	54 9
25	27.19. 1	4 3 46	29 43	54 26
26	♓ 9 22.42	4 41 7	29 57	54 52
27	21.39 24	5 6 25	30 16	55 26
28	♈ 4.13 17	5 17 49	30 39	56 9
29	17. 8.26	5 13 46	31 7	57 1
30	♉ 0.28.12	4 52 58	31 38	57 57
31	14.14.58	4 15 0	32 10	58 56

Congress. ☽ cum fixis & Plane

Dies Mensis.	Nomen & Character fixarum & Planetarum.	Tempus verum conjunctionis in longitud. H. M.	Distantia centri ☽ vera in latitudinem. G. M.
4	ζ ♈ 5	9 59	1 3 B
7	II ♊ 4	6 26	0 27 B
10	h ♌ 6	11 51	1 8 B
	ο ♌ 4	15 20	0 6 B
12	e ♌ 4	19 14	0 37 B
26	ϰ ♒ 5	6 45	0 25 B
17	ϰ ♓ 5	9 10	0 38 B
	9 ♓ 6	9 13	0 47 B
	16 ♓ 6	14 3	0 52 B

DECEMBER.

Dies Mensis	Aetas ☾	Phænomena & Observationes ☽
1	11	☾ ad d δ ε ♓
2	12	☾ ad μ η π ν ♓
3	13	☾ ad ι ϑ ξ μ ♈
4	14	☾ ad ρ ε δ ζ ♈
5	15	☾ ad γ δ ε α ♉ ♊
6	16	Lunistitium bor. ad β ζ ♉
7	17	☾ in nodo desc. et ad η μ ν γ ε ♊
8	18	☾ Perigæa et ad δ κ ♊ μ ψ ♋
9	19	☾ ad ϑ γ δ α κ ♋
10	20	☾ ad ο ξ ψ ν ♌
11	21	☾ ad α ρ ♌
12	22	☾ in Aequatore et ad χ σ τ e ♌
13	23	☾ ad b r η c ♍
14	24	☾ ad ψ k ϑ g ♍
15	25	☾ ad κ l χ ♍
16	26	☾ ad λ ♍ μ ξ α ♎
17	27	☾ ad ζ γ κ η ♎
18	28	☾ ad δ β σ α ♏
19	29	Lunistitium australe ad A ρ ϑ Oph.
20	30	☾ ad p b γ δ ♐
21	1	☾ in nodo asc. et ad φ σ ο τ π ♐
22	2	☾ Apogæa et ad χ h e f ω ♐
23	3	☾ ad β σ ρ ψ ♑
24	4	☾ ad ϑ χ ζ ε γ ♑
25	5	☾ ad λ μ ♑ ϑ ζ ♒
26	6	☾ ad κ τ λ h φ ♒
27	7	☾ in Aequat. et ad κ λ ♓
28	8	☾ ad d ♓
29	9	☾ ad δ ε e μ ♓
30	10	☾ ad ι ϑ ξ ♈
31	11	☾ ad μ ε δ ζ ♈

Dies Mensis	Phænomena & Observationes Planetarum.
9	Conjunctio ☉ et ♃.
12	♃ ad ρ Oph. h. 14.
13	⚳ ad 1 ♊ media nocte dist. cent. 1 gr. 8 min. austr.
15	♀ ad η ♑ h. 13 dist. centr. ♀ 0 gr. [illegible] austr.
19	☿ in elong. maxima.
20	♀ ad ι ♑ h. 1. dist. centr. ♀ 0 gr. [illegible] m. austr.
22	♀ in distan med. a ☉
	⚳ ad 134 ♊ dist. centr. ⚳ 0 gr. 53 [illegible] bor.
23	♄ in lat. max. hel.
27	♀ in nodo ascendente.
	♀ ad μ ♑ h. 13. dist. centr. ♀ 1 gr. [illegible] min. austr.

	Phases Lunæ.
6	Plenilunium h. [illegible] m. 13. in ♊ gr. 14 m. 3.
14	Ultimus Quadrans h. 17 m. 42 in ♍ gr. 20 m. 48.
20	Novilunium h. 13. m. 13. in ♐ gr. 28. m. 46.
28	Primus Quadrans h. 17 m. 25 in ♈ gr. 7. m. 6.

Planetæ in parallelis fixarum.

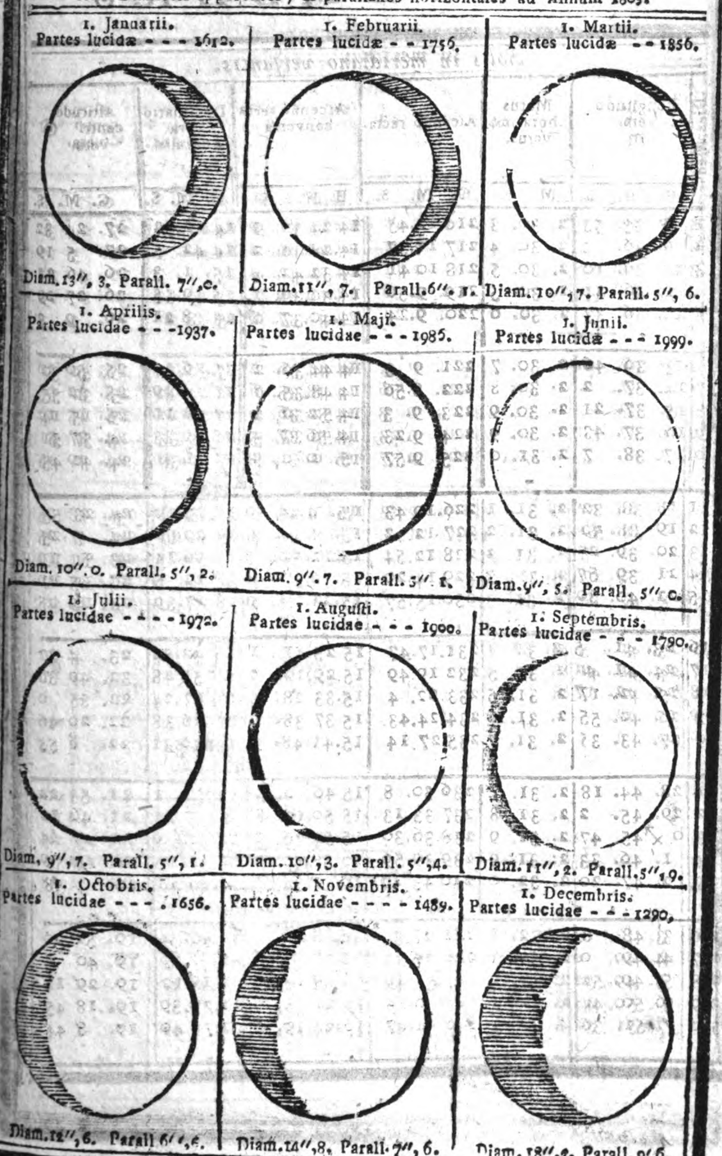
♅ sub init. ϑ ♒ ad finem χ ♍
♄ mense toto α Hydræ.
♃ in radiis ☉
♂ sub init. ζ Argo navis ad finem β Oph.
♀ 1. β Oph. 7 γ Lepor. 13 ρ Oph. 19 ν [illegible] 25 Sirii.
☿ 1. λ ♐ 7 α ♏ 13 λ ♐ 19 β Oph. 2[illegible] Corvi.

DECEMBER.

Dies Mensis	Ortus Planetarum apparens. H.	M.	Tempus verum culminationis planetarum. H.	M.	Longitudo planetarum Sole culminante. G.	M.	Latitudo Planetarum Sole culminante. G.	M.	Declinatio Planetarum Sole culminante. G.	M.	Occasus Planetarum apparens. H	M.
						⛢ *Uranie.*						
1	15	39	21	2	24 ♎	4	0 B	35	8 A	49	2	25
7	15	14	20	37	24	20	0	35	8	54	2	0
13	14	50	20	12	24	35	0	35	8	59	1	34
19	14	25	19	46	24	49	0	35	9	5	1	7
25	14	0	19	21	25	2	0	36	9	10	0	42
						♄ *Saturnus.*						
1	15	38	21	7	24 ♎	50	2 B	20	7 A	27	2	36
7	15	15	20	43	25	24	2	21	7	38	2	11
13	14	51	20	19	25	56	2	22	7	48	1	47
19	14	27	19	54	26	26	2	24	7	57	1	21
25	14	3	19	30	26	54	2	25	8	5	0	57
						♃ *Jupiter.*						
1	20	14	0	28	15 ♐	26	0 B	25	22 A	15	4	42
7	19	55	0	8	16	47	0	24	22	23	4	21
13	19	35	23	47	18	8	0	24	22	31	3	59
19	19	16	23	27	19	30	0	24	22	39	3	38
25	18	56	23	6	20	52	0	23	22	46	3	16
						♂ *Mars.*						
1	21	9	1	11	25 ♐	19	0 A	51	24 A	13	5	13
7	21	4	1	5	29	53	0	53	24	21	5	6
13	20	57	0	58	4 ♑	29	0	55	24	18	4	59
19	20	50	0	52	9	5	0	57	24	6	4	54
25	20	41	0	45	13	42	0	59	23	44	4	49
						♀ *Venus.*						
1	23	12	3	15	23 ♑	36	2 A	31	23 A	52	7	18
7	23	6	3	18	0 ♓	27	2	26	22	26	7	30
13	22	57	3	19	7	11	2	16	20	40	7	42
19	22	47	3	20	13	50	2	1	18	36	7	53
25	22	34	3	19	20	19	1	49	16	18	8	4
						☿ *Mercurius.*						
1	21	0	0	55	22 ♐	26	2 A	8	25 A	24	4	50
7	21	20	1	12	1 ♑	25	2	19	25	47	5	4
13	21	28	1	23	9	56	2	10	25	16	5	18
19	21	26	1	29	17	14	1	37	23	58	5	32
25	21	5	1	18	21	27	0	25	22	9	5	21

Jupiter in radiis solis.

Phases Veneris prima cujusvis Mensis die in partibus diametri 2000.
item Diametri apparentes, & parallaxes horizontales ad Annum 1805.



TABULA SYSTE-

Exhibens Planetarum magnitudines, diſtantias, Inclinationes orbi

Nomina Planetarum.	Ratio diametrorum ad diametrum telluris.	Ratio ſuperficierum ad ſuperficiem telluris.	Ratio ſoliditatis ad ſoliditatem telluris.	Inclinatio orbitarum ad Eclipticam.	Inclinatio orbitar. ad Æquatorem ☉	Inclinatio orbitarum ad ſuos Æquatores
☉ Sol.	111 major Diametro Telluris	12247 major Tellure.	1355350 major Tellure	- - -	- - -	- - -
☿ Merc	$\frac{2}{5}$ Telluris.	Paullo minor $\frac{1}{6}$ Telluris.	$\frac{1}{16}$ Telluris.	G. M. 7 0	G. M. 0. 32 $\frac{1}{2}$	- - -
♀ Ven.	$\frac{20}{21}$ Tellur.	$\frac{10}{11}$ Telluris.	$\frac{13}{15}$ Telluris.	G. M. S. 3. 23. 20.	G. M. 4. 7.	G. M. 15. 0.
♁ Tellus.	Diam. telluris 1720. milliar. Germ.	Superficies telluris 9288000. mill. quadrata.	Soliditas telluris 2662560000 milliaria cubica.	- - -	G. M. 7. 30.	G. M. 23. 28.
☾ Luna	$\frac{3}{11}$ telluris.	$\frac{1}{13}$ Telluris.	$\frac{1}{49}$ Telluris.	- - -	- - -	G. M. 7. 30.
♂ Mars	$\frac{3}{5}$ Telluris.	$\frac{1}{3}$ Telluris.	$\frac{1}{5}$ Telluris.	G. M. 1. 51.	G. M. 5. 45.	- - -
♃ Jupit.	Min. quam undecies major tellure.	Plusquam 116 major tellure.	1244 major Tellure.	G. M. S. 1. 19. 10.	G. M. 6. 19.	G. M. 5. 0.
Saturnus.	Paulo minus quam decies major tellure.	97. major tellure.	963 major Tellure.	G. M. S. 2. 30. 20.	G. M. 5. 27.	- - -
♅ Uranie.	$4\frac{1}{4}$ major Tellure.	19 major Tellure.	$83\frac{1}{4}$ major Tellure.	0°46′20″	6°. 44′.	- - -

Syſtema Jovis.

Satellites Jovis	Tempus periodicum circa Jovem. D.	H.	M.	Ratio Diametrorum ad Diametrum Jovis.	Ratio Diametror. ad Diam. Tell.	Diametri orbitarum: M.	S.
1.	1.	18.	28.	ut 1. ad 20.	1. ad 2.	3.	55.
2.	3.	13.	14.	1. - 20.	1. - 2.	6.	16.
3.	7.	3.	43.	1. - 18.	5. - 9.	9.	58.
4.	16.	16.	32.	1. - 20.	1. - 2.	17.	30.

MATIS SOLARIS.

tarum, &revolutionum Tempora juxta parallaxim ſolis mediam 8. 7

Apparentes Diamet. in diſtan. minima telluris.	Diſtantia minima a Tellure in ſemidiametris Telluris.	Diſtantia a Sole in ſemidiametris Telluris. Diſtantia maxima a ſole.	Diſtantia a Sole in ſemidiametris Telluris. Diſtantia minima a Sole.	Tempus periodicum circa ſolem.	Tempus revolutionis circa axes proprios.
32'.34''	23310.	- - -	- - -	- - -	D. H. 25. 12.
13''. 4.	12243.	11067.	7288.	D. H. M. 87.23.15.	H. M. S. 24. 5. 30.
1'., 5''	6040.	17270.	17028.	D. H. M. 224.16.48.	H. M. 23. 22
- - -	- - - -	24107.	23310.	365. D. 5. H 48. m. 48.Sec.	D. H. M. 0. 23. 56.
33'.34''	56.	- - -	- - -	D. H. M. 27. 7. 43. 4. circa tellurem.	D. H. M. S. 27. 7. 43. 4
28''. 0.	8647.	39496.	32754.	1. An. 321. D. 22. H. 18. m. 27. Sec.	H. M. 24. 39.
47''. 6.	93212.	129297.	117319.	11. An. 315. D. 8.H. 58. m. 27. Sec.	H. M. 9. 56.
21''. 35.	189454.	238770.	213561.	29. An. 164. D. 7. H. 21. m. 50. Sec.	H. M. 10. 16.
4''. 4.	409319.	475342	433426.	83 Ann. 292 D 8. H. 56. m.	- - - -

Syſtema Saturni.

Satellites ♄.	Tempus periodicum circa Saturnum. D. H. M.	Diametr Orbitarum. M. S.
1.	1. 21. 18.	1. 27.
2.	2. 17. 45.	1. 52.
3.	4. 12. 25.	2. 36.
4.	15. 22. 41.	6. 0.
5.	79. 7. 54.	17. 24.

Syſtema Uraniæ.

Satell. ♅	Temp. period. D. H. M.	Diſtant. 0' 0''
1.	5. 21. 25.	0 25 5
2.	8. 17. 1.	0 33 0
3.	10. 23. 4.	0 38 6
4.	13. 11. 5.	0 44 2
5.	38. 1. 49.	1 28 4
6.	107. 16. 40.	2 56 8

Catalogus Fixarum
Bradlejanus cum ſupplemento de la Caillii ad principium A. 1805.

Nr. Stellæ Bradleji.	Nomen Stellæ & Character.		Aſcenſio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D	S. D.	G. M. S. C.	S. C.
1	γ Pegaſi Algenib.	2	0. 3.13.5	3. 1.	19. 5.56.80. B	+ 20.04
2	i Ceti.	3	0. 9.26.1	3. 1.	9.54.55.00. A	− 20.00
3	d Piſcium.	5	0. 10.35.4	3. 1.	7. 6.40.00. B	+ 20.40
4	δ Andromedæ.	3	0. 28.52.1	3. 1.	29.47. 0.45. B	+ 20.01
5	α Caſſiopeæ.	3	0. 29.24.8	3. 3.	55.28. 5.11. B	+ 19.91
6	β Ceti	3	0. 33.47.0	3. 0.	19. 3.34.15. A	− 19.80
7	ζ Andromedæ.	4	0. 37. 3.5	3. 2.	23.13. 6.30. B	+ 19.82
8	20 Ceti.	5	0. 43. 4.5	3. 1.	2.12.19.70. A	− 19.74
9	γ Caſſiopeæ.	3	0. 45. 2.7	3. 5.	59.39.31.01. B	+ 19.71
—	ε Piſcium.	4	0. 52.48.4	3. 1.	6.51.15.50. B	+ 19.5
10	α Polaris.	2	0. 53. 1.0	12. 5.	88.15.57.90. B	+ 19.7
11	e Piſcium.	4	0. 58.21.4	3. 1.	4.37. 4.70. B	+ 19.46
12	η Ceti.	3	0. 58.47.4	3. 0.	11.13. 2.64. A	− 19.45
13	β Andromedæ.	2	0. 58.51.2	3. 3.	34.35. 2.25. B	+ 19.45
14	ϑ Caſſiopeæ.	4	0. 59.16.9	3. 5.	54. 6.37.60. B	+ 19.44
15	ζ Piſcium.	4	1. 3.32.8	3. 1.	6.32.28.50. B	+ 19.30
16	δ Caſſiopeæ.	3	1. 13. 5.1	3. 7.	59.13.10.40. B	+ 19.12
17	ϑ Ceti.	3	1. 14.17.3	3. 0.	9.11.22.85. A	− 19.27
18	μ Piſcium.	5	1. 19.57.9	3. 1.	5. 8.11.45. B	+ 18.92
19	η Piſcium	5	1. 21. 4.8	3. 2.	14.20.14.70. B	+ 18.88
20	π Piſcium.	5	1. 26.45.1	3. 1.	11. 8.21.95. B	+ 18.71
21	105 Piſcium.	5	1. 29.10.7	3. 2.	15.24.47.34. B	+ 18.63
22	ν Piſcium.	4	1. 31.17.3	3. 1.	4.29.47.30. B	+ 18.56
23	o Piſcium.	4	1. 35. 4.9	3. 1.	4.10.16 45. B	+ 18.41
24	ε Caſſiopeæ.	3	1. 40.28.9	4. 1.	62.42.15.15. B	+ 18.27
—	α Trianguli.	4	1. 41.56.8	3. 3.	28.37.43.14. B	+ 18.22
25	γ Arietis.	4	1. 42.52.7	3. 3.	18.20. 6.00. B	+ 18.20
26	β Arietis.	3	1. 43.54.2	3. 3.	19.51. 4.30. B	+ 18.10
27	ι Arietis.	5	1. 46.51.7	3. 2.	16.51.29.00. B	+ 18.00
28	λ Arietis.	5	1. 47. 5.1	3. 3.	22.38.48.50. B	+ 18.50
29	α Piſcium.	3	1. 51.58.3	3. 1.	1.49. 0.00. B	+ 17.80
30	γ Andromedæ.	2	1. 51.58.6	3. 6.	41.23.19 00 B	+ 17 80
31	α Arietis.	2	1. 56.11.1	3. 3.	22.32.11.00. B	+ 17.60
—	β Trianguli.	4	1. 57.57.5	3. 5.	34. 3.38.56. B	+ 17.59
32	19 Arietis.	5	2. 2.24.0	3. 2.	14.21.38.65. B	+ 17.37
33	1. ξ Ceti	4	2. 2.27.4	3. 1.	7.55.53.65. B	+ 17.37

Catalogus Fixarum
Bradlejanus cum fupplemento de la Caillii ad principium Anni 1805.

Nr. ftel. læ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C.	S. C.
34	1. ξ Ceti.	5	2. 2.42.4	3. 2.	4.55.35.65. B	+ 17. 37
—	γ Trianguli.	4	2. 5.44.6	3. 5.	32.56.27.25. B	+ 17. 25
35	1. ϑ Arietis.	5	2. 7.17.8	3. 3.	18.59.53.75. B	+ 17. 15
36	o Ceti mutabilis.	2	2. 9.30.0	3. 0.	3.52. 1.20. A	— 17. 04
37	2. ξ Ceti.	4	2. 17.45.8	3. 1.	7.33.17.35. B	+ 16. 63
38	δ Ceti.	3	2, 29.31.1	3. 1.	0.31.10.00. A	— 16. 00
39	ε Ceti.	3	2. 30. 8.5	2. 9.	12.42. 9.10. A	— 16. 02
40	ϑ Perfei.	4	2. 30.39.3	3. 5.	48.23.50.90. B	+ 16. 02
41	35 Arietis	4	2. 31.54.3	3. 5.	26.52. 6.70. B	+ 15. 80
42	γ Ceti.	3	2. 33.13.5	3. 1.	2.24.35.70. B	+ 15. 86
43	μ Ceti.	4	2. 34.24 5	3. 2.	9.17. 4.00. B	+ 15. 80
44	* Ceti.	3	2. 34.50.1	2. 8.	14.41.24.36. A	— 15. 77
45	τ Perfei.	5	2. 40.28.4	4. 1.	51.57.20.50. B	+ 15. 50
46	3. ρ Arietis.	5	2. 45.31.2	3. 3.	17.14.27.00. B	+ 15. 20
47	η Eridani.	3	2. 46.53.7	2. 9.	19.40.28.50. A	— 15. 10
48	ε Arietis.	5	2. 47.41.4	3. 4.	20.33.11.55. B	+ 15. 05
49	γ Perfei.	3	2. 50.43.9	4. 2.	52.43.57.86. B	+ 14. 93
50	α Ceti.	2	2. 52. 5.4	3. 1.	3.19. 2.00. B	+ 14. 70
51	β Perfei Algol.	3	2. 55.30.0	3. 8.	40.11.42.35. B	+ 14. 63
52	δ Arietis.	4	3. 0.26.1	3. 3.	18.58.50.95. B	+ 14. 31
53	ζ Arietis.	5	3. 3.42.6	3. 4.	20.18.54.95. B	+ 14. 11
54	12 Eridani.	3	3. 3.45.3	2. 5.	29.46. 8.85. A	— 14. 07
55	ζ Eridani	3	3. 6.22.2	2. 9.	9.33. 6.60. A	— 13. 92
56	α Perfei.	2	3. 10.28.3	4. 2.	49. 9.26.60. B	+ 13. 72
57	2. τ Arietis.	5	3. 11.32.5	3. 4.	20. 2.10.90. B	+ 13. 62
58	f. Tauri.	4	3. 20.15 6	3. 3.	12.15.37.25. B	+ 13. 05
59	17 Eridani.	4.5	3. 20.54.3	2. 9.	5.45.10.00. A	— 13. 00
—	ε Eridani.	3	3. 23.49.5	2. 9.	10. 7.25.65. A	— 12. 81
60	δ Perfei.	3	3. 29. 5.7	4. 2.	47. 9.12.00. B	+ 12. 49
61	b Plejadum.	5	3. 33.18.3	3. 5.	23.29.23.65. B	+ 12. 17
62	e Plejadum.	5	3. 33.35.9	3. 5.	23.50.50.30. B	+ 12. 14
63	δ Eridani	3.4	3. 33.56.4	2. 9.	10.26.28.40. A	— 12. 08
64	d Plejadum.	5	3. 34.45 9	3. 5.	23.19.56.64. B	+ 12. 06
65	η Tauri.	3	3. 35.53.8	3. 5.	23.29.37.20. B	+ 12. 00
—	f. Plejadum Atlas.	5	3. 37.33.8	3 5.	23.26.57.10. B	+ 11. 90
—	ζ Perfei.	3	3. 41.42.2	3. 7.	31.17.43.95. B	+ 11. 61

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium Anni 1805.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C.	S. C.
—	ε Persei.	3	3. 44.48.0	4. 0.	39.26.11.75. B	+ 11.42
—	l. Eridani.	4	3. 45.23.7	2. 5.	25.12.47.60. A	− 11.28
66	γ Eridani.	2	3. 48.56.2	2. 8.	14. 4.11.55. A	− 11.01
67	1.λ Persei.	4	3. 52. 2.8	4. 4.	49.48.39.70. B	+ 10.86
68	A Tauri.	4	3. 53. 9.8	3. 5.	21.32.26.30. B	+ 10.74
—	o Eridani.	4	4. 2.20.8	2. 9.	7.21.10.55. A	− 10.05
69	Φ Tauri.	5	4. 8.24.3	3. 7.	26.52 27 00. B	+ 9.60
70	γ Tauri.	3	4. 8.39.3	3. 3.	15. 8.51.00. B	+ 9.60
71	χ Tauri.	5	4. 10.43.4	3. 6.	25. 9.32 10. B	+ 9.40
72	1 δ Tauri.	3	4. 11.41.2	3. 4.	17. 4.31.80. B	+ 9.34
73	2.δ Tauri.	4	4. 12.51 1	3. 4.	16.58.59.25. B	+ 9.25
74	1.κ Tauri.	5	4. 13 44.3	3 5.	21.50.17.10. B	+ 9.18
75	2.κ Tauri.	4	4. 13.47 2	3. 5.	21.44.38.65. B	+ 9.17
76	3. δ Tauri.	5	4. 14.11.7	3. 4.	17.28 19.87. B	+ 9.13
77	1. υ Tauri.	5	4. 14.37.1	3. 5.	22.21.41.50. B	+ 9.10
78	ε. Tauri.	3	4. 17.15.2	3. 5.	18.44.14.36. B	+ 8.93
79	1.ϑ Tauri.	5	4. 17.26.6	3. 4.	15.31.10.15. B	+ 8.87
80	2. ϑ Tauri.	5	4. 17 32 3	3. 4.	15.25.40.15. B	+ 8.87
81	Aldebaran.	1	4. 24.43.8	3. 4.	16. 6.33.50. B	+ 8.30
—	ν Eridani.	3	4. 27.57.9	2. 3.	13.57.58 10. A	− 8.10
—	53. Eridani.	3	4. 29.15.8	2. 7.	14.41.24.90. A	− 7.94
82	τ Tauri.	5	4. 30.30 7	3. 5.	22.34.19.70. B	+ 7.84
—	54. Eridan	3	4. 31.56.0	2. 6.	20. 3 10.45. A	− 7.71
83	1.π Orionis	4	4. 39.57.7	3. 2.	8.33.23.70. B	+ 7.06
84	7 Camelopard.	5	4. 41.39.3	4. 7.	53.25.34 45. B	+ 7.01
85	ι Tauri.	4	4 51.29.1	3. 5.	21.18. 5.30. B	+ 6.14
86	m Tauri.	5	4. 55.54 3	3. 5.	18.22.17.70. B	+ 5.75
87	105 Tauri.	5	4. 56.14.2	3. 5.	21.26. 5.85. B	+ 5.73
88	h Eridani.	3	4. 58.15.3	2. 9.	5.20.47.75. A	− 5.53
89	Capella	1	5. 2.17.8	4. 4.	45.47.29.60. B	+ 5.28
90	Rigel.	1	5. 5.10.6	2. 9.	8.26. 8.72. A	− 4.92
91	β Tauri.	2	5. 13.56.6	3. 7.	28.25.57 00. B	+ 4.20
—	η Orionis.	3	5. 14.40.2	3. 2.	2.35. 2 65. A	− 4.17
92	γ Orionis	2	5. 14 40.4	3. 0.	6. 9.45.75. B	+ 4.15
93	o Tauri.	5	5. 15.53.3	3. 6.	21.45.31.70. B	+ 4.06
94	2.ψ Orionis	5	5. 16.36.5	3. 1.	2.55. 0.10. B	+ 3.98

Catalogus Fixarum
Bradlejanus cum fupplemento de la Caillii ad principium Anni 1805.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Afcenfio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
—			H. M. S. D.	S. D.	G. M. S. C.	S. C.
95	β Leporis.	3	5. 19.51.9	2. 5.	20.55.20.30. A	− 3.66
96	δ Orionis.	2	5. 22. 4.7	3. 1.	0.27.12.50. A	− 3.50
97	α Leporis.	3	5. 24. 6.9	2. 6.	17.58.14.50. B	− 3.30
98	ι Orionis.	3	5. 25.55.0	3. 5.	6. 2.45.28. A	+ 3.20
—	ζ Tauri.	3	5. 25 55.5	2. 9.	21. 0 39 60. A	− 3.21
99	ε Orionis.	2	5. 26.17.2	3. 0.	1.20.12.15 A	− 3.13
100	125. Tauri.	5	5. 27 38.9	3. 7.	25.46.33.70. B	+ 3.06
—	ζ Orionis.	2	5. 30.55.9	3. 0.	2. 3.15.00. A	− 2.78
—	α Columbæ.	2	5. 32. 6.6	2. 2.	34.10.59.65. A	− 2.57
101	γ Leporis.	3	5. 36.17.5	2. 4.	22.31. 6,75. A	− 2.23
102	132. Tauri.	4	5 37. 4.3	3. 7.	24.29.24.25. B	+ 2.25
—	κ Orionis.	3	5. 38.30.2	2. 8.	9.44.44.00. A	− 2.10
103	136. Tauri	5	5. 41. 2.3	3. 7.	27.33 16.50. B	+ 1.90
104	1. χ Orionis.	3	5. 42.49.1	3. 5.	20.13.57.35 B	+ 1.83
105	δ Aurigæ.	4	5. 42.51.7	4. 9.	54.15.26.65. B	+ 1.77
—	δ Leporis.	3.4	5. 42.57.2	2. 6.	20.53.39.40. A	− 1.70
106	2. χ Orionis.	5	5. 43.22.5	3. 5.	19.41.32.60. B	+ 1.68
—	β Columbæ.	3	5. 44. 5 8	2. 1.	30.51. 4.00 A	− 1.56
107	α Orionis.	1	5. 44.35.6	3. 2.	7.21.35.30. B	+ 1.56
—	β Aurigæ.	3	5. 45.13.7	4. 4.	44.54.49.00. B	+ 1.64
108	ϑ Aurigæ.	4	5. 47. 6 7	4 1.	37.11.10.70. B	+ 1.40
109	H Geminorum.	5	5. 52 14.6	3. 6.	23.15.48.94. B	+ 0.91
110	κ Aurigæ.	5	6. 2.56.5	3. 8.	29.33.38.42. B	− 0.06
111	η Geminorum.	4	6. 3. 5.9	3. 6	22.33 8.00. B	0.00
112	μ Geminorum.	3	6. 11. 8.6	3. 6.	22 36.14 50. B	− 0.70
—	ζ Can. major.	3	6. 12.50.6	2. 3.	29 59 0.56. A	+ 0.94
—	β Can. major.	2	6. 14. 5.7	2. 6.	17.52.14 68. A	+ 1.20
113	ν Geminorum.	4	6. 17 24.4	3. 6.	20.19.27 50. B	− 1.30
114	23. Geminorum.	5	6. 24.45.7	3. 5.	— — — —	— — —
115	γ Geminorum.	2	6. 26.27.9	3. 5.	16.33.16.50 B	− 2.10
116	26. Geminorum.	5	6. 31. 2 8	3. 5	17 49 35.40. B	− 2.48
117	ε Geminorum.	3	6. 31.56.1	3. 7.	25.19 47.50. B	− 2.50
118	28. Geminorum.	5	6. 32.21.8	3. 8.	29. 9.21.60. B	− 2.58
119	Syrius.	1	6 36.35.8	2. 7.	16.26.16.43. A	+ 3.01
—	ε Canis majoris.	3	6. 50.59.5	2. 4.	28.42. 7.60. A	+ 4.24
120	ζ Geminorum.	4	6. 52.33.5	3. 6.	20.50.51.81. B	− 4.33

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium Anni 18…

Nr Stellæ Bradlej.	Nomen Stellæ & Character.		Ascensio recta in tempore. H. M. S. D.	Variatio annua. S. D.	Declinatio. G. M. S. C.			Va… S. …
—	δ Canis majoris.	3	7. 0.26.9	2. 4.	26. 5.28.40.	A	+	5.
121	51 Geminorum.	5	7. 2.11.8	3. 5.	16.28.45.80.	B	−	5.
122	λ Geminorum.	5	7. 6.22.7	2. 5.	16.52.55.26.	B	−	5.
123	19 Lyncis.	5	7. 6.53.9	4. 9.	55.38. 5.28.	B	−	5.
124	δ Geminorum.	3	7. 8.28.6	3. 6.	22.19.49.30.	B	−	5.
125	q Geminorum.	5	7. 10.27.8	3. 6.	20.48. 3.70.	B	−	[illegible]
126	ι Geminorum.	5	7. 13.38.5	3. 8.	28.10.31.50.	B	−	6.
127	p Geminorum	5	7. 16.10.4	3. 6.	21.50. 4.50.	B	−	6.
128	η Canis majoris.	2	7. 16.24.3	2. 4.	28.55.45.98.	A	+	6.
—	β Canis minoris.	3	7. 16.35.8	3. 3.	8.40.34.61.	B	−	6.
129	Castor.	1	7. 22.10.2	3. 9.	32.18.18.00.	B	−	6.
130	υ Geminorum.	4	7. 23.57.0	3. 7.	27.19.11.25.	B	−	6.
131	f. Geminorum.	5	7. 28.13.5	3. 5.	18. 6.30.50.	B	−	7.3
132	Procyon.	1	7. 29. 7.7	3. 2.	5.43.50.10.	B	−	7.4
133	κ Geminorum.	5	7. 32.38.4	3. 6.	24.51.21.85.	B	−	7.6
134	Pollux.	1	7. 33.13.2	3. 7.	28.29.15.60.	B	−	7.7
135	g Geminorum.	5	7. 34.50.3	3. 5.	18.58.33.75.	B	−	7.8
136	26 Lyncis.	5	7. 40.27.9	4. 4.	48. 3.30.65.	B	−	8.3
—	ξ Argonavis.	3.4	7. 41. 5.2	2. 5.	24.22.41.40.	A	+	8.3
137	φ Geminorum.	5	7. 41.32.9	3. 7.	27.15.37.22.	B	−	8.5
138	3 Cancri.	5	7. 50.25.7	3. 5.	18.46. 7.95.	B	−	9.0
139	μ Cancri.	3	7. 54.55.5	3. 6.	23.10.59.04.	B	−	9.4
—	ρ Argonavis. 3.	4	7. 58.10.1	1. 4.	23.44. 2.33.	A	+	9.7
140	2 ψ Cancri.	4	7. 58.40.2	3. 6.	26. 5.43.15.	B	−	9.7
141	β Cancri	3	8. 5.57.1	3. 3.	9.46.41.95.	B	−	10.2
142	ϑ Cancri.	5	8. 20.27.9	3. 4.	18.44.46.75.	B	−	11.5
143	η Cancri.	5	8. 21.25.1	3. 5.	21. 5.48.35.	B	−	11.3
144	γ Cancri.	4	8. 31.59.6	3. 5.	22. 9.43.37.	B	−	12.1
145	δ Cancri.	4	8. 33.34.5	3. 4.	18.51.55.20.	B	−	12.3
—	ζ Hydræ.	4	8. 45. 4.1	3. 2.	6.41.17.35.	B	−	13.0
146	1 α Cancri.	4	8. 45.16.6	3. 3.	12.21.43.00.	B	−	[illegible]
147	ι Ursæ majoris.	4	8. 45.49.5	4. 2.	48.48.11.85.	B	−	13.
148	2. α Cancri.	4	8. 47.39.0	3. 3.	12.36.18.50.	B	[illegible]	[illegible]
—	χ Ursæ majoris.	4	8. 50.16.5	4. 2.	47.55.10.75.	B	−	[illegible]
149	κ Cancri	5	8. 57.11.7	3. 3.	11.26.44.75.	B	−	13.8
150	ξ Cancri.	6	8. 58. 8.6	3. 5.	22.49.37.50.	B	−	13.9

Catalogus Fixarum
[illegible]lejanus cum supplemento de la Caillii ad principium Anni 1805.

Nomen Stellæ & Character.		Ascensio recta in Tempore. H. M. S. D	Variatio annua S. D.	Declinatio. G. M. S. C.	Variatio annua. S. C.
Leonis.	5	9. 47.50.6	3. 2.	9.53.58.15. B	— 15.11
Cor. Hydræ.	2	9. 18. [illegible]	3. 0.	7.49. 8.25. A	+ 15.13
Ursæ majoris.	4	9. [illegible]	4. 2.	52.34. 1.90. B	— 15.18
Leonis.	4	9. [illegible]	3. 3.	12. 9.26.55. B	— 15.31
Leonis.	5	9. [illegible].47.8	3. 2.	7.42.47.15. B	— 15.33
Leonis.	4	9. [illegible] 43.6	3. 2.	16.46.26.25. B	— 15.83
Leonis.	3	9. 34.44.[illegible]	3. 4.	24.39.58.65. B	— 16.03
Leonis.	3	9. 41.41.1	3. 5.	26.55.14.65. B	— 16.35
Leonis.	5	9. 47.45.5	3. 3.	13.22.11.95. B	— 16.69
Leonis.	4	9. 49.54.7	3. 2.	8.58.32.45. B	— 16.79
Leonis.	4	9. 56.41.7	3. 3.	17.42.31.95. B	— 17.11
Leonis.	5	9. 57.38.2	3. 2.	10.56.57.15. B	— 17.15
Regulus.	1	9. 58. 1.7	3. 3.	12.54.57.35. B	— 17.17
ζ Leonis.	3	10. 5.50.6	3. 4.	24.23. 6.05. B	— 17.51
γ Leonis.	2	10. 9.11.0	3. 3.	20.49.32.36. B	— 17.66
μ Ursæ major.	3	10.19.39.1	3. 6.	42.28.33.50. B	— 17.70
Leonis.	4	10.22.33.5	3. 2.	10.18.25.35. B	— 18.17
48 Leonis.	5	10.24.38.1	3. 1.	7.57.13.30. B	— 18.26
37 Sextantis.	6	10.35.57.2	3. 1.	7.24.40.20. B	— 18.60
38 Sextantis.	6	10.37. 9.4	3. 1.	7.22.20.00. B	— 18.60
56 Leonis.	6	10.45.33.1	3. 1.	7.13.29.00. B	— 18.80
55 Leonis.	5	10.45.40.7	3. 1.	1.46.26.00. B	— 18.94
β Ursæ majoris.	2	10.49.58.6	3. 7.	57.25.28.95. B	— 19.05
α Crateris	3	10.50. 3.4	2. 2.	17.15.45.20. A	+ 19.06
Leonis.	5	10.50.29.5	3. 1.	4.39.45.50. B	— 19.10
c Leonis.	5	10.50.29.8	3. 1.	7.18.51.00. B	— 19.00
α Ursæ majoris.	1.2	10.51.25.6	3. 1.	62.48. 7.95. B	— 19.09
χ Leonis.	5	10.55. 0.7	3. 2.	8.23.19.45. B	— 19.19
δ Leonis.	3	11. 3.42.5	3. 2.	21.25.14.00. B	— 19.40
θ Leonis.	3	11. 4. 1.8	3. 2.	16.29.41.00. B	— 19.40
75 Leonis.	3	11. 7.15.5	3. 1.	3.25.21.20. B	— 19.48
76 Leonis.	5	11. 8.35.2	3. 0.	2.43.27.05. B	— 19.51
σ Leonis.	5	11.11.34.7	3. 1.	7.25.48.40. B	— 19.56
79 Leonis.	5.6	11.14. 2.8	3. 1.	2.28.37.96. B	— 19.60
τ Leonis.	4	11.17.54.8	3. 1.	3.55.46.46. B	— 19.68
e Leonis.	5	11.20.22.8	3. 1.	1.55.42.40. A	+ 19.73

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium A. 1805.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D.	S D.	G. M. S. C.	S. C.
185	υ Leonis.	4	11.26.59.1	3. 1.	0.15. 7.00.B	− 19.80
186	1ξ Virginis.	5	11.34 42.3	2. 4.	9.20.30.05.B	− 19.91
187	ν Virginis.	5	11.35.19.0	2. 4.	7.37.28.60.B	− 19.92
188	β Leonis.	1. 2	11.39. 7.3	3. 1.	15.39.49.25.B	− 19.95
189	β Virginis.	3	11.40 30.9	3. 1.	2.52 1.00.B	− 20.00
190	γ Ursæ majoris.	2	11.43.30.0	3. 2.	54.46.44.49 B	− 19.99
191	π Virginis.	5	11.50.53.3	3. 1.	7.42. 7.65.B	− 20.03
—	α Corvi.	4	11.58.24.2	3. 1.	23.38 25.35.A	+ 20.05
—	ε Corvi.	4	12. 0. 9.0	3. 1.	21.32. 4.35.A	+ 20.05
192	δ Ursæ Majoris.	3	12. 5.41.3	3. 0.	58. 7. 3 75.B	− 20.05
193	γ Corvi.	3	12. 5.49.2	3. 1.	16.27.29.20.A	+ 20.04
194	n Virginis.	5	12. 8.42.1	3. 1.	0.17.55.30.B	− 20.05
195	η Virginis	3	12. 9.57.5	3. 1.	0.25. 7.00. B	− 20.00
196	c Virginis.	5	12.10.29.3	3. 1.	4.24. 0.20. B	− 20.04
—	δ Corvi.	4	12.11.49.6	3. 1.	15.25 35.05.A	+ 19.99
—	β Corvi.	3	12.24. 9.3	3. 1.	22.18.56.11.A	+ 19.96
197	κ Draconis.	3	12.25. 7.5	2. 7.	70.51.54 80.B	− 19.96
198	χ Virginis.	5	12.29.12.7	3. 1.	6.55. 9.90.A	+ 19.92
199	γ Virginis.	3	12.31.50.4	3. 1.	0.22 39.52.A	+ 19.90
200	ψ Virginis.	5	12.44.13.7	3. 1.	8.28.33 90.A	+ 19.72
—	ε Ursæ majoris.	3	12.45.17.5	2. 7.	57. 1 16.85. B	− 19.71
201	δ Virginis.	3	12.45 47.1	3. 0.	4.27.40.50. B	− 19 70
202	ε Virginis.	3	12.52.29.4	3. 0.	12. 0.36.35. [illegible]	− 19.57
203	g Virginis.	5	12.57.41.2	3. 1.	9.41.37.60.A	+ 19.48
204	ϑ Virginis.	4	12.59.52.6	3. 1.	4.29.38 36.A	+ 19.43
—	γ Hydræ.	3	13. 8.19.9	3. 2.	22. 8.20.10 A	+ 19.24
—	ι Centauri.	3	13. 9 40.5	3. 3.	35.40.43.75. A	+ 19.21
205	Spica Virginis.	1	13.14.54 9	3. 1.	10. 7.33.66. A	+ 18.97
206	ζ Ursæ majoris.	3	13.16. 1.2	2. 4.	55 56.50.55. B	− 19.01
207	ι Virginis.	5	13.16.27.9	3. 2.	11.40.39 50. A	+ 19 01
208	21 Virginis.	5	13.17.50.5	3. 1.	5.14.37.70.A	+ 18.86
—	ζ Virginis.	3	13.24.48.1	3. 1.	0.23.57.90.B	− 19.48
209	m Virginis.	5	13.31.26.6	3. 2.	7.42.53.20. A	+ 18.56
210	η Ursæ majoris.	2	13.39.52.1	2. 4.	50 17.17.00. B	− 18.24
—	η Bootis.	3	13.45.25.0	2. 9.	19.23.12.76. B	− 18.07
—	ϑ Centauri.	3	13.55.18.2	3. 5.	37.23.46.70. A	+ 17 70

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium A. 1805.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D	S. D.	G. M. S. C.	S. C.
211	α Draconis.	2	13.59.24.2	2. 0.	65.18.37.20. B	− 17.46
212	κ Virginis.	4	14. 2.26.7	3. 1.	9.21.41.65. A	+ 17.37
213	Arcturus.	1	14. 6.49.7	2. 8.	20.13.39.80. B	− 17.16
214	λ Virginis.	4	14. 8.34.0	3. 2.	12.28. 1.53. A	+ 17.1[illegible]
215	ϑ Bootis.	4	14.18.36.4	2. 1.	52.45.44.90. B	− 16.58
—	γ Bootis.	3	14.24.12.3	2. 4.	39. 9.53.10. B	− 16.32
—	ζ Bootis.	3	14.31.51.5	2. 9.	14 34.20.07. B	− 15.95
—	ε Bootis.	3	14.36.28.0	2. 6.	27.54. 8.75. B	− 15.69
216	μ Libræ.	5	14.38.40.5	3. 3.	13.19.44.10. A	+ 15.58
217	α Libræ.	2	14.40. 7.4	3. 3.	15.13 22.50. A	+ 15.50
218	2 ξ Libræ.	5	14.46.11.4	3. 2.	10.36.52.75. A	+ 15.15
219	18 Libræ.	5	14.48.21.4	3. 2.	10.21. 4.35. A	+ 15.03
220	β Ursæ minoris.	3	14.51.27.1	--0. 3.	74.57.16 40. B	− 14.68
—	β Bootis.	3	14.54.38.5	2. 3.	41. 9.53 95. B	− 14.63
221	1 ν Libræ.	5	14.55.46.1	3. 3.	15.29 31.54. A	+ 14.59
222	1 ι Libræ.	5	15. 1. 8.4	3. 4.	19. 2.41.15. A	+ 14.27
223	β Libræ.	2	15. 6 32.0	3. 2.	8.39.18.85. A	+ 13.93
—	δ Bootis.	3	15. 7.37.9	2. 4.	34. 3. 2.50. B	− 13.84
--	ι Draconis.	3	15.20.35 5	1. 3.	59.40. 9.55. B	− 12.93
224	γ Ursæ minoris.	3	15.21 17 7	--0.03.	72 31.43.90. B	− 12.80
—	4ζ Libræ.	4	15 21.57.9	3. 3.	16.10.52 05 A	+ 12.89
225	γ Libræ. 3.	4	15.24 37.1	3. 3.	14. 7.46.50. A	+ 12.70
—	δ Serpentis.	3	15.25 31 2	2. 9	11.11.54.35 B	− 12.69
226	α Coronæ borealis.	2	15.26,25 2	2. 5.	27.22.44.50. B	− 12.60
227	42 Libræ.	5	15.28.46.5	3. 5.	23.10.24.60. A	+ 12.48
228	κ Libræ.	4	15.30.43.7	3. 4.	19. 2. 6.30. A	+ 12.34
229	α Serpentis.	2	15 34 38 9	2. 9.	7. 2.47.63. B	− 12.03
—	β Serpentis	3	15.37.13 0	2. 8.	16. 2.26.60. B	− 11.88
—	μ Serpentis.	4	15.39.26.0	3. 1.	2.49.24.80 A	+ 11.74
—	ε Serpentis.	4	15.41. 6.0	3. 0.	5. 4 21 50 B	− 11.62
230	A Scorpii.	5	15.41.57 1	3. 6.	5.44 2.60. A	+ 11.56
231	λ Libræ.	4	15.42. 3.8	3. 5.	19.34.28.30. A	+ 11.54
232	ρ Serpentis.	4	15.42.42.4	2. 6.	21.34 15.75. B	− 11.45
233	ϑ Libræ.	4	15.42.44.1	3. 4.	16. 8.55 50 A	+ 11.50
—	ρ Scorpii.	4	15.44.53.7	3. 7.	28.37.58.15. A	+ 11.39
234	π Scorpii.	3	15.47. 5.1	3. 6.	25.32. 4.56. A	+ 11.19

Catalogus Fixarum Bradlejanus cum supplemento de la Caillii ad principium A. 1805.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.			Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.	
				H. M. S. D.	S. D.	G. M. S. C.	S. C.	
235	ψ	Libræ.	4	15.47.16.5	3. 3.	13.42.22.73. A	+	11.15
———	γ	Serpentis.	3	15.47.25.1	2. 7.	16.19.30.80. B	—	11.14
236	δ	Scorpii.	3	15.48.48.9	3. 5.	22. 3.17.00. A	+	11.00
237	β	Scorpii.	2	15.54. 8.5	3. 5.	19.15.41.50. A	+	10.70
238	1 ω	Scorpii.	5	15.55.26.0	3. 5.	20. 7.48.20. A	+	10.56
239	2 ω	Scorpii.	5	15.55.59.9	3. 5.	20.19.51.40. A	+	10.52
240	υ	Herculis.	5	15.56.44.7	1. 9.	46.34.44.40. B	—	10.38
———	ϑ	Draconis.	4	15.58.15.6	1. 1.	59. 4.56.80. B	—	10.24
241	ν	Scorpii.	4	16. 0.42.4	3. 5.	18.56.35.20. A	+	10.16
242	δ	Ophiuchi.	3	16. 4. 7.5	3. 1.	3.10.51.05. A	+	9.89
———	ε	Ophiuchi.	3	16. 8. 2.5	3. 2.	4.12.27.39. A	+	9.63
243	19	Scorpii.	5	16. 8.38.2	3. 2.	23.41.11.75. A	+	9.55
244	σ	Scorpii.	4	16. 9.21.0	3. 6.	25. 6.49.85. A	+	9.53
245	ψ	Ophiuchi.	5	16.12.43.2	3. 5.	19.34.12.25. A	+	9.25
———	γ	Herculis.	3	16.13.17.7	2. 6.	19.37. 5.43. B	—	9.25
246	g	Ophiuchi.	5	16.13.56.1	3. 6.	22.59.10.20. A	+	9.16
247	α	Antares.	1	16.17.26.6	3. 6.	25.59.15.05. A	+	8.89
248	φ	Ophiuchi.	4	16.19.58.9	3. 4.	16.10.33.05. A	+	8.69
249	ω	Ophiuchi.	5	16.20.34.7	3. 5.	21. 2.29.50. A	+	8.64
———	η	Draconis.	3	16.21.22.6	0. 8.	61.57.23.40. B	—	8.42
———	β	Herculis.	3	16.21.52.5	2. 6.	21.55.38.54. B	—	8.52
250	τ	Scorpii.	4	16.23.46.3	3. 7.	27.48. 0.85. A	+	8.41
———	ζ	Ophiuchi.	3	16.26.28.5	3. 3.	10. 9.44.90. A	+	8.20
251	24	Scorpii	5	16.30.20.2	3. 5.	— — — — —	—	— —
———	ζ	Herculis.	3	16.33.59.4	2. 3.	31.57.26.60. B	—	7.52
———	η	Herculis.	3	16.36.42.7	3. 0.	39.18. 6.50. B	—	7.32
———	ε	Scorpii.	3	16.37.35.1	3. 9.	33.55. 3.65. A	+	7.35
———	ε	Herculis.	3	16.52.49.8	2. 3.	31.13.17.55. B	—	5.97
———	η	Ophiuchi.	2	16.59.11.3	3. 4.	15.28.21.91. A	+	5.57
252	A	Ophiuchi duplex.	5	17. 3.24.2	3. 7.	26.17.13.30. A	+	5.14
253	μ	Draconis.	4	17. 4.20.8	1. 2.	54.43.52.05. B	—	4.91
254	α	Herculis.	3	17. 5.44.8	2. 7.	14.37.15.85. B	—	4.87
———	δ	Herculis.	3	17. 8. 3.0	2. 5.	25. 4.49.70. B	—	4.70
255	ρ	Ophiuchi.	4	17. 9.20.0	3. 6.	20.53.18.35. A	+	4.63
256	ϑ	Ophiuchi.	3	17.10. 4.2	3. 7.	24.47.27.65. A	+	4.57
257	43	Ophiuchi.	5	17.11. 7.7	3. 8.	27.56.24.05. A	+	4.49

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium A. 1805.

Nr. stellæ Bradlej.	Nomen Stellæ & Character		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.	
			H. M. S. D	S. D.	G. M. S. C		S. C.
258	B Ophiuchi.	4	17.14.26.6	3. 6.	23.58.52.55. A	+	4.19
259	e Ophiuchi.	5	17.19.30.2	3. 6.	23.47.57.20. A	+	3.76
260	α Ophiuchi.	2	17.25.50.3	2. 7.	12.42.49.25. B	−	3.15
261	β Draconis.	3	17.26. 0.9	1. 3.	52.27. 1.75. B	−	3.05
262	μ Ophiuchi.	4	17.27.17.0	3. 3.	7.59.18.01. B	+	3.07
263	D Ophiuchi.	5	17.31.45.9	3. 6.	21.34.31.75. A	+	2.71
—	β Ophiuchi.	3	17.33.52.0	3. 0.	4.39.23.70. B	−	2.52
264	p Sagittarii.	3	17.35.19.0	3. 8.	27.44.34.05. A	+	2.41
—	γ Oph. austr.	3	17.38. 7.7	3. 0.	2.47.32.45. B	−	2.15
—	μ Herculis.	3	17.38.40.8	2. 2.	27.51.15.20. B	−	2.04
265	b. Sagit. dupl.	4	17.47.55.2	3. 7.	23.47. 4.50. A	+	1.30
—	ϑ Herculis.	5	17.49.36.1	2. 1.	37.16.58.00. B	−	1.08
—	ζ Serpentis.	3	17.50.13.3	3. 2.	3.39.55.19. A	+	1.13
266	γ Draconis.	4	17.52. 6.4	1. 4.	51.31. 1.90. B	−	0.78
—	γ Sagittarii.	4	17.52.33.3	3. 8.	29.34.35.50. A	+	0.96
267	γ Sagittarii.	3. 4	17.53.19.2	3. 9.	30.24.34.80. A	+	0.84
268	1μ Sagittarii.	2	18. 2. 6.8	3. 6.	21. 5.45 75. A	−	0.05
269	2μ Sagittarii.	4	18. 3.26 2	3. 6.	20.46.26.75. A	−	0.05
270	δ Sagittarii.	3	18. 8.30.3	3. 8.	29.53.49.95. A	−	0.49
271	η Serpentis.	3	18.11.14.7	3. 1.	2.55.48.33. A	−	0.72
—	ε Sagittæ.	2	18.11.14.8	4. 0.	34.27.40.10. A	−	0.73
272	λ Sagittarii.	4	18.15.56.7	3. 7.	25.30.49.25. A	−	1.15
273	α Lyræ.	1	18.30.16.9	2. 0.	38.36.15.40. B	+	2.52
274	φ Sagittarii.	3	18.30.29.8	3. 8.	27.10.39.70. A	−	2.68
275	28 Sagittarii.	5	18.34.34.2	3. 6.	22.34.58.90. A	−	2.78
276	C Draconis.	5	18.38.52.6	1. 2.	55.20.41.01. B	+	3.31
277	1 ν Sagittarii.	4	18.42.23.0	3. 6.	22.58.20.75. A	−	3.45
278	β Lyræ.	3	18.42.52.9	2. 2.	33. 8.53.55. B	+	3.59
279	σ Sagittarii.	3	18.43. 6.5	3. 7.	26.31.28.70. A	−	3.54
280	2 ν Sagittarii.	4	18.43.18.0	3. 6.	22.54. 9.50. A	−	3.54
281	1ξ Sagittarii.	5	18.45.56.2	3. 6.	20.53.56.25. A	−	3.75
282	2ξ Sagittarii.	5	18.46.12.8	3. 6.	21.21. 3.25. A	−	3.75
283	d Serpen. Duplex	3	18.46.32.7 } 18.46.33.9 }	3. 0.	3.57.24.30 } 3.57.30.30 } B	+	3.85
—	δ Lyræ.	3	18.47.41.7	2. 1.	59.39.30.40. B	+	3.98
284	τ Draconis.	4	18.48.19.2	0. 9.	59. 9.11.30. B	+	4.14
285	ζ Sagittarii.	4	18.50.11.3	3. 8.	30. 8 37.99. A	−	4.11

Catalogus Fix[illegible]
Bradlejanus cum supplemento de la Ca[illegible] ad principium A. 18[illegible]

Nr. Stellæ Bradlej.	V ıs	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
				H. M. S. D.	S. D.	G. M. S. C	S. C
—	ε	Aquilæ.	4	18.50.46.1	2. 7.	14.48.48.45. B	+ 4.[illegible]
—	γ	Lyræ.	3	18.51.37.4	2. 2.	32.25.50 35 B	+ 4.3[illegible]
286	ο	Sagittarii.	3	18.52.59.8	3. 6.	22. 0 52.80. A	− 4.3[illegible]
287	τ	Sagittarii.	3	18.54.47.3	3. 8.	27.56.20.50 A	− 4.5[illegible]
—	λ	Antinoi.	4	18.55.54.8	3. 2.	5. 9.51 60. A	− 4.6[illegible]
288	ζ	Aquilæ.	3	18.56.28 9	2. 8.	13.35. 6,25. B	+ 4.8[illegible]
289	π	Sagittarii.	4	18.58. 9.7	3. 6.	21.19.17 00. A	− 4.8[illegible]
290	ψ	Sagittarii.	4	19. 3.39.8	3. 8.	25.34.45.90. A	− 5.2[illegible]
291	d	Sagittarii.	4	19. 6.12.4	3. 5.	19.17.28.00. A	− 5.[illegible]
292	δ	Draconis.	3	19.12.28.6	0,05.	67.19. 7.44. B	+ 6.[illegible]
293	κ	Cygni.	4	19.12.36.0	1. 4.	53. 0.38.20. B	+ 6.[illegible]
294	1χ	Sagittarii.	5	19.13.25.7	3. 7.	24.52.32.95. A	− 6.[illegible]
295	δ	Aquilæ.	3	19.15.38.9	3. 0.	2.43.59.94. B	+ 6.[illegible]
—	β	Cygni.	3	19.22.58.3	2. 8.	27.33.26.85. B	+ 6.9[illegible]
296	ι	Cygni.	4	19.24.47.3	1. 5.	51.19. 1.20. B	+ 7.[illegible]
297	2h	Sagittarii.	5	19.25. 1.2	3. 7.	25.18 12.53. A	− 7.[illegible]
—	ι	Antinoi.	4	19.26.37.7	3. 1.	1.41.34.45. A	− 7.[illegible]
—	α	Sagittæ.	4	19.31.24.2	2. 7.	17.34.27.21. B	+ 7.[illegible]
298	ϑ	Cygni.	5	19.31.48.2	2. 4.	49.46.13.12. B	+ 7.6[illegible]
299	f	Sagittarii.	4	19.34.58 2	3. 5.	20.13. 8.48. A	− 7.[illegible]
300	γ	Aquilæ.	3	19 37. 2.1	2. 9.	10. 8.47.15. B	+ 8.0[illegible]
301	δ	Cygni.	3	19.38.54.0	1. 9.	44.39.33.15. B	+ 8.2[illegible]
302	α	Aquilæ.	1	19.41.14.6	2. 9.	8.21.23.00. B	+ 8.4[illegible]
—	η	Antinoi.	4	19.42.32.8	3. 1.	0.30.53.26. B	+ 8.4[illegible]
303	ω	Sagittarii.	5	19.43.52.5	3. 7.	26.48.21.80. A	− 8.5[illegible]
304	b	Sagittarii.	4	19.44.59.1	3. 7.	27.40.30.20. A	− 8.6[illegible]
305	β	Aquilæ.	3	19.45.42.8	2. 9.	5.56. 6 60. B	+ 8.7[illegible]
306	α	Sagittarii.	5	19.46.54.6	3. 7.	26.42.44.55. A	− 8.8[illegible]
307	ε	Draconis.	5	19.49 17.0	−0. 1.	69.46.25.65. B	+ 9.1[illegible]
308	ϑ	Aquilæ.	3	20. 1.14.7	3. 1.	1.23.29.25. A	− 9.9[illegible]
309	ρ	Draconis.	5	20. 1.52 7	0. 3.	67.19. 6.75. B	+ 10.[illegible]
310	1α	Capricorni.	4	20. 6.48.8	3. 3.	13. 6. 6.00. A	− 10.4[illegible]
311	2α	Capricorni.	3	20. 7.12.4	3. 3.	13. 8.25.00. A	− 10.4[illegible]
312	σ	Capricorni.	5	20.8.10.3 / 20.8.18.8	3. 5.	19.43. 4.65. A	− 10.4[illegible]
313	β	Capricorni.	3	20. 9.59 3	3. 3.	15.23 18.00. A	− 10.6[illegible]
—	γ	Cygni.	3	20.15.11.6	2 1.	39.38.21,50. B	+ 11.[illegible]

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium A. 1805.

	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio	Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C.	S. C.
4	ρ Capricorni.	5	20 17.42.5	3 4.	18.26.56.25.A	− 11.15
	ε Delphini.	4	20.23.54.6	2. 9.	10.38.58.15. B	+ 11.59
	ζ Delphini.	4	20.26 11.2	2. 8.	14. 0 31.50. B	+ 11.76
	β Delphini.	3	20 28 24.3	2. 8.	13.55.29.80 B	+ 11.92
5	υ Capricorni.	5	20.28.54.8	3. 4.	18.48.58.80.A	− 11.96
16	α Delphini.	3	20.30.36 7	2. 8.	15.13.51. 50.B	+ 12.10
	δ Delphini.	4	20.34 21 0	2. 8.	14.22.55.75.B	+ 12.33
17	α Cygni.	1	20.34.46 9	2. 0.	44.35.17.77.B	+ 12.44
18	ε Aquarii.	4	20.37. 8.2	3. 3.	10.12. 4 65.A	− 12.53
	γ Delphini.	4	20.37.37.4	2. 8.	15.25.54 20. B	+ 12.56
19	ε Cygni.	3	20.38.18.6	2. 4.	33.14.23.70. B	+ 12.66
20	μ Aquarii.	4	20.42. 6 0	3. 2.	9.42.24.35.A	− 12.87
21	19 Capricorni.	4	20.43.45.9	3. 4.	18.39.14.00.A	− 12.98
22	η Capricorni.	5	20.53.16.4	3. 4.	20.37. 2.45. A	− 13.59
23	ϑ Capricorni.	4	20.54.58.7	3. 4.	17.59.56.06.A	− 13.71
24	1 χ Capricorni.	5	20.58.23 9	3. 5.	21.58 14 43.A	− 13.85
25	ν Aquarii.	5	20.58.54.2	3. 2.	12. 9.15.72.A	− 13.94
26	φ Capricorni.	5	21. 4.29.4	3. 4.	21.27.15.50 A	− 14.30
	ζ Cygni.	4	21. 4.36.1	2. 5.	29.26. 1.10. B	+ 14.32
27	29 Capricorni.	5	21. 4.55.3	3. 3.	15.58.28.15.A	− 14.33
28	α Equulei.	4	21. 8. 5.6	3 0.	4.26.55.90. B	+ 14.42
29	ι Capricorni.	5	21.11.24.0	3. 4.	17.39.28 82.A	− 14.72
	e Pegasi.	4	21.12.52.9	2. 6.	18.58.29.75.B	+ 14.81
	α Cephei.	3	21 13.53.2	1. 4.	61.45.45 75. B	+ 14.95
	ζ Capricorni.	4	21.15.31.4	3. 5.	23.14.55.80.A	− 14.96
32	b Capricorni.	5	21.17.30.5	3. 3.	22.38.57.40.A	− 15.08
33	β Aquarii.	3	21.21.18.5	3. 2.	6.25.22.50.A	− 15.30
34	β Cephei.	3	21.26. 5.3	0. 8.	69.42.22 70. B	+ 15.66
35	ε Capricorni.	4	21.26. 9.6	3. 4.	20.19.58.00 A	− 15.60
36	ρ Cygni.	4	21.26.35.8	2. 2.	44.44. 6 80. B	+ 15.64
37	ξ Aquarii.	6	21.27.21.7	3. 2.	8.43.19.20.A	− 15.64
38	γ Capricorni.	4	21.29.14.9	3. 3.	17.32.12.50.A	− 15.70
39	κ Capricorni.	5	21.31.46.2	3. 4.	19.43.54.85.A	− 15.87
	ε Pegasi.	3	21.34.33.6	2. 9.	8.59 11 85. B	+ 16.01
	μ Cygni.	4	21.35.25.9	2. 7.	24.52.11.98. B	+ 16.07
40	λ Capricorni.	5	21.36 0.3	3. 2.	12.15.34 50.A	− 16.10

Catalogus Fixarum
Bradlejanus cum supplemento de la Caillii ad principium Anni 1805.

Nr. Stellæ Bradlej.	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.	
			H. M. S. D.	S. D.	G. M. S. C.		S C.
341	δ Capricorni.	3	21.36.17.9	3. 4.	17. 0.17.10. A	−	16.10
342	2 π Cygni.	5	21.39.36.3	2. 2.	48.24.41.40. B	+	16.32
343	μ Capricorni.	5	21.42.39.4	3. 3.	14.27.48.00. A	−	16.44
344	ο Aquarii.	5	21.53.13.1	3. 1.	3. 5.29.80. A	−	16.96
345	α Aquarii.	3	21.55.46.6	3. 1.	1.15.44.60. A	−	17.10
346	ι Aquarii.	5	21.55.55.3	3. 3.	14.48.34.85. A	−	17.07
347	35 Aquarii.	5	21.58.16.0	3. 3.	19.28. 6.90. A	−	17.18
348	ϑ Aquarii.	4	22. 6.33.1	3. 2.	8.44.55.75. A	−	17.54
349	ρ Aquarii.	5	22. 9.57.1	3. 2.	8.47.53.94. A	−	17.69
350	γ Aquarii.	3	22.11.34.9	3. 1.	2.21.58.76. A	−	17.76
351	π Aquarii.	4	22.15.20.3	3. 1.	0.23.30.95. B	+	17.91
352	ζ Aquarii.	4	22.18.43.0	3. 1.	1. 0.49.20. A	−	18.04
353	σ Aquarii.	5	22.20.19.7	3. 2.	4.40.19.04. A	−	18.09
354	7 Lacertæ.	4	22.23.15.3	2. 4.	49.16.58.84. B	+	18.23
355	υ Aquarii.	5	22.24. 0.4	3. 3.	21. 2. 1.65. A	−	18.23
356	η Aquarii.	4	22.25. 7.0	2. 8.	1. 7.52.90. A	−	18.58
357	κ Aquarii.	5	22.27.39.0	3. 1.	5.13.43.36. A	−	18.37
—	ζ Pegasi.	3	22.31.43.3	3. 0.	9.49. 5.35. B	+	18.49
—	η Pegasi.	3	22.33.24.2	2. 8.	29.12.18.35. B	+	18.57
358	1 τ Aquarii.	5	22.37.21.1	3. 2.	15. 4.51.00. A	−	18.68
359	2 τ Aquarii.	4	22.39.15.9	3. 2.	14.37. 5.25. A	−	18.75
360	λ Aquarii.	4	22.42.25.2	3. 1.	8.36.52.20. A	−	18.84
361	ι Cephei.	4	22.42.49.0	2. 1.	65.10.40.60. B	+	18.88
362	δ Aquarii.	3	22.44.17.6	3. 2.	16.51.16.50. A	−	18.90
363	Fomalhaut.	1	22.46.49.1	3. 3.	30.39. 0.35. A	−	18.97
—	ο Andromedæ.	4	22.52.56.4	2. 7.	41.16.48.30. B	+	19.14
364	β Piscium.	4	22.53.59.2	3. 1.	2.46.20.65. B	+	19.17
365	β Pegasi.	2	22.54.21.0	2. 9.	27. 1.21.10. B	+	19.18
366	1 h Aquarii.	6	22.54.58.0	3. 1.	8.44.38.00. A	−	19.20
367	α Pegasi. Markab.	2	22.55. 4.3	3. 0.	14. 9.30.00. B	+	19.20
368	2 h Aquarii.	7	22.55. 8.4	3. 1.	8.48.16.00. A	−	19.20
369	3 h Aquarii.	7	22.55.41.9	3. 1.	8.59.12.00. A	−	19.20
370	Φ Aquarii.	4	23. 4.12.9	3. 1.	7. 5.44.55. A	−	19.41
371	1 ψ Aquarii.	5	23. 5.38.2	3. 1.	10. 8.52.20. A	−	19.44
372	χ Aquarii.	6	23. 6.44.0	3. 1.	8.47.14.85. A	−	19.47
373	2 ψ Aquarii.	5	23. 7.45.0	3. 1.	10.14.40.68. A	−	19.47

Catalogus fixarum
Bradlejanus cum supplemento de la Caillii ad principium A. 1805.

	Nomen Stellæ & Character.		Ascensio recta in tempore.	Variatio annua.	Declinatio.	Variatio annua.
			H. M. S. D.	S. D.	G. M. S. C.	S. C.
[illegible]	3 ψ Aquarii	5	23. 8.50.7	3. 1.	10.40.29.05.A	— 19.51
375	96 Aquarii	5	23. 9.15.5	3. 1.	6.11.16.85.A	— 19.57
376	d Cassiopeæ	5	23.16.13.7	2. 6.	61.12.53.00.B	+ 19.56
377	1 κ Piscium	5	23.16.57 5	3. 1.	0.11.26.70.B	+ 19.66
378	1 λ Andromedæ	4	23.28. 3.2	2. 9.	45.24.29.80.B	+ 19.84
[illegible]	γ Cephei	4	23.31.24 8	2. 3.	76.32.23.85.B	+ 19.87
379	λ Piscium	5	23.32. 7.9	3. 1.	0.42.34.60.B	+ 19.88
380	19 Piscium	5	23.36.27.8	3. 1.	0.25.18.95.B	+ 19.93
[illegible]	27 Piscium	5	23.48 42.5	3. 1.	— — — —	+ — —
[illegible]	ω Piscium	4	23.49.19.7	3. 1.	6.47. 7.91.B	+ 20.02
[illegible]	29 Piscium	5	23.51.51.0	3. 1.	4. 6.46.65.A	— 20.03
[illegible]	30 Piscium	5	23.51.58 5	3. 1.	7. 5.51.65 A	— 20.03
[illegible]	33 Piscium	5	23.55.22.4	3. 1.	6.47.57.75.A	— 20.05
386	α Andromedæ	2	23.58.20.9	3. 1.	28. 0.43.25.B	+ 20.05
387	β Cassiopeæ	3	23.58.47.1	3. 0.	57. 4.37.25.B	+ 20.05



Nr. Stellæ.	Nomen Stellæ & Character.	Ascensio recta.	Variatio 10 Annorum in Ascensionem rectam.	Variatio annua ejusdem.	Differentia a de la Caille.	Aberratio maxima in Ascensionem rectam.
		S. G. M. S.	M. S. C.	S. C.	S. D.	S. D.
1	γ Peg. Algenib. 2	0 0 13 35	7 42 00	46 20	— 1 3	18 8
2	ι Ceti 3	0 1 44 28	7 39 60	45 96	-2.15.5*	18 7
3	d Piscium 5	0 2 4 1	7 42 70	46 27	+ 8 8*	18 5
4	δ Andromedæ 3	0 6 38 13½	7 54 00	47 40	+ 4 1	21 1
5	α Cassiopeæ 3	0 6 45 35	8 15 80	49 58	— 0 1	32 1
6	β Ceti 3	0 7 52 59	7 32 20	45 22	— 2 2	19 4
7	ζ Andromedæ 4	0 8 39 58	7 54 60	47 46		20 0
8	20 Ceti 5	0 10 11 19	7 40 40	46 04	— 5 9*	18 4
9	γ Cassiopeæ 3	0 10 36 19	8 44 20	52 42	+ 9 7	36 2
10	ε Piscium 4	0 12 37 43	7 47 00	46 70	+11 1*	18 5
11	e Piscium 5	0 14 0 30	7 45 50	46 55	+10 1*	18 6
12	β Andromedæ 2	0 14 5 40	8 15 20	49 52	+21 4	22 3
13	η Ceti 3	0 14 7 48	7 33 10	45 19	+ 0 8	18 9
14	ϑ Cassiopeæ 4	0 14 9 48	8 49 0	52 90		31 4
15	ζ Piscium 4	0 15 18 18	7 47 50	46 75	+10 7*	18 6
16	δ Cassiopeæ 3	0 17 34 49	9 22 50	56 25	— 1 3	36 0
17	ϑ Ceti 3	0 18 0 33	7 31 50	45 15	— 5 8	18 8
18	μ Piscium 5	0 19 24 35	7 47 60	46 76	+ 8 8*	18 6
19	η Piscium 5	0 19 40 14	7 58 80	47 88	+ 9 1*	19 2
20	π Piscium 5	0 21 6 13	7 55 70	47 57	+ 9 6*	18 9
21	105 Piscium 5	0 21 41 38	8 1 90	48 19	+ 7 0*	19 2
22	ν Piscium 4	0 22 14 26	7 46 40	46 64	— 0 1*	18 7
23	ο Piscium 4	0 23 11 14	7 52 80	47 28	+ 1 7	18 8
24	ε Cassiopeæ 3	0 24 21 0	10 21 80	62 18	+ 1 3	39 5
25	γ Arietis 4	0 25 6 7	8 10 00	49 00	+ 5 6	19 6
26	β Arietis 3	0 25 21 28	8 12 50	49 25	+ 4 7	19 7
27	ι Arietis 5	0 26 4 16	8 8 00	48 80	+ 9 5*	19 5
28	λ Arietis 5	0 26 9 11	8 14 80	49 48		20 3
29	γ Andromedæ 2	0 27 19 7	9 2 50	54 25	+ 7 7	24 9
30	α Piscium 3	0 27 24 46	7 44 30	46 43	+ 1 3	18 7
31	α Arietis 2	0 28 25 28	8 19 82	49 98	— 2 7	20 2
32	19 Arietis 5	1 0 0 8	8 7 10	48 71	+ 8 7*	19 4
33	1 ξ Ceti 4	1 0 4 35	7 55 50	47 55	+ 1 0*	19 0
34	1 ξ Ceti 5	1 0 4 40	7 55 40	47 54		18 9
35	1 ϑ Arietis 5	1 1 12 18	8 17 20	49 72	+ 2 8*	19 8
36	ο Ceti variab. 2	1 1 48 41	7 34 10	45 41	+ 9 4	18 9
37	2 ξ Ceti 4	1 3 51 24	7 56 30	47 63	+ 2 5*	19 0
38	δ Ceti 3	1 6 47 59½	7 40 30	46 03	— 8 0	18 9
39	ϑ Persei 4	1 6 58 56	9 56 70	59 67		28 3

Declinatio	Variatio 10 annorum.	Variatio annua.	Differentia a de la Caille.	Aberratio maxima in Declin.	Longitudo.	Latitudo.
G. M. S.	M. S. C	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
13.50.55 B	+3.20.40	+20 04	− 3. 5	8. 7	0. 5.48.46.½	12.35.34.½B
20.10. 1 A	−3.20.00	−20.00	+39. 1*	8. 6	11 27.30.16.	10. 0.47. A
6.51.20 B	+3.24.00	+20.40	− 4. 4*	8. 3	0. 4.37.55.	5.27.52.½B
29.32. 0 B	+3 20. 10	+20.01	−43. 1	11. 5	0.18.27.49.	24.20.11 B
55.13. 8 B	+3.19.10	+19.91	+ 5. 6	16. 5	1. 4.27.25.	46.36.31 B
19.18.27 A	−3.18.60	−19.86	− 1. 4	10. 5	11.29.12.22.	20.47. 7. A
22.57.30 B	+3.18.20	+19.82		10. 0	0.17.14.52.	17.36 35. B
2.27. 8 A	−3.17.40	−19.74	+ 4. 7*	8. 2	0 8.23.31.	6.17.38. A
59.24.44. B	+3.17.10	+19.71	+ 3. 0	17. 0	1.10.36. 5.	48.47.41. B
6.35.34. B	+3.15.80	+19 58	− 2. 6	7. 8	0.14.11.15.	1. 5 37. B
4.22.29 B	+3.14.60	+19.46	− 6. 7*	7. 8	0.14.35.14.½	1.29.56. A
34.20.27 B	+3.14.50	+19.45	− 5. 3	11. 6	0.27. 3.36.	25.56. 8. B
11.27.39 A	−3.14.50	−19.45	+ 6. 8	9. 5	0. 8.23.56.	16. 6.50. A
53.52. 3. B	+3.14.40	+19,44		15. 6	1. 8.27.10.	43. 6. 28.B
6.18. 0 B	+3.13.00	+19.30	− 4. 2	7. 7	0.16.31.15.	0.13,11. A
58.58.50 B	+3.11.20	+19.12	+ 6. 4	16. 3	1.14.34.43.	46. 23.29.B
9.25.41 A	−3.10.70	−19.07	+ 3. 8	9. 3	0.12.52.48.	15.46. 1. A
4.54. 0 B	+3. 9. 20	+18.92	− 4. 6*	7. 6	0.19.46. 6.	3. 4. 4. A
14. 6. 5 B	+3. 8. 80	+18.88	+ 2. 0*	7. 7	0.23.28. 4.½	5.21.45. B
10.54.20 B	+3. 7. 10	+18.71	− 4. 7*	7. 5	0.23.24.11.	1.52.32. B
15.10.49 B	+3. 6. 30	+18.63	− 0. 2*	7. 4	0.25.41.50.	5.37.49½.B
4.15.52 B	+3. 5. 60	+18.56	− 6. 9*	7. 6	0.22. 9.17.	4.42.37. A
7.56.28 B	+3. 4. 10	+18.41	− 5. 1*	7. 4	0.24.23.11.½	1.38.17. A
62 28.33. B	+3. 2.70	+18.27	+ 4. 1	16. 4	1.21.25.56.½	47.31.36. B
18. 6.27. B	+3. 2.00	+18.20	− 8. 0	7. 7	0.29.50. 8.	7. 9. 7. B
19.37.30 B	+3. 1.00	+18.10	− 5. 1	7. 9	1. 0.37.13.	8.28.38. B
16.38. 9 B	+3. 0.00	+18.00	− 2. 3*	7. 5	1.0 .10. 2.	5 26.32.½B
22.24.56 B	+3. 5.00	+18.50		8. 1	1. 2.21. 6.	10.48.23. B
41. 9.58 B	+2.58.00	+17.80	− 1. 6	11. 3	1.10.53. 6.	27.47.13. B
1.35.39 B	+2.58.00	+17.80	− 8. 0	7. 8	0.26. 1.20.	9. 4 41. A
22.18.59. B	+2.56.00	+17 60	− 4. 2	7. 9	1. 4.18.28.	9.57.30. B
14 8.37 B	+2.53.70	+17.37	− 4. 0*	7. 0	1. 2.50.35.	1.46.40. B
7.42.52 B	+2.53.70	+17 37	+10. 6*	7. 1	1. 0 41.30.	4.16.54. A
4 42.33 B	+2.53.7	+17 37		7. 5	0.29.38.48.	7. 6. 5. A
18.47. 2. B	+2.51.50	+17.15	+17. 0*	7. 1	1 5.31 36.	5.44.22. B
4. 4.48 A	−2.50.40	−17.04	− 0 3	8. 8	0.28.10 17.	15 56.32. A
7.20.49 B	+2.46.30	+16.63	−96. 9*	7. 0	1. 4. 6.22.	5.53.54. A
0.43.10. A	−2 40.00	−16.00	+ 4. 8	8. 0	1. 4.12.50.	14.28.54 A
48.11.50 B	+2.40.20	+16.02		12. 2	1.21 18.10.½	31.36.21 B

Nr. ſtellæ.	Nomen Stellæ & Character.		Aſcenſio recta. S. G. M. S.	Variatio 10 Annorum in Aſc. rectam. M. S. C.	Variatio annua in Aſc. rectam. S, C.	Differentia a de la Caille. S. D.	Aberratio maxima in Aſcenſionem rectam. S. D.
40	ε Ceti.	3	1 6 59 31	7 14 20	43 42	+ 1 8	19 4
41	35 Arietis.	4	1 7 21 28	8 43 00	52 30		21 2
42	γ Ceti.	3	1 7 43 27	7 46 50	46 65	+ 4 8	19 0
43	μ Ceti.	4	1 8 0 6	8 1 60	48 16	+ 8 3*	19 2
44	π Ceti.	3	1 8 10 39	7 8 90	42 89		19 7
45	τ Perſei.	5	1 9 20 51	10 23 20	62 32		30 9
46	3ρ Arietis.	5	1 10 43 55	8 21 90	50 19	+ 1 1*	19 9
47	η Eridani.	3	1 11 10 45	7 18 80	43 88		19 4
48	ε Arietis.	5	1 11 23 3	8 31 10	51 11	+ 5.0*	20 5
49	γ Perſei.	3	1 11 53 38	10 36 50	63 65	+ 0 8	31 1
50	α Ceti.	2	1 12 26 24	7 49 00	46 90	+ 2 2	19 1
51	β Perſei Algol.	3	1 13 9 52	9 37 00	57 70	+12 6	24 4
52	δ Arietis.	4	1 14 29 11	8 29 70	50 97	+ 0 8*	20 3
53	ζ Arietis.	5	1 15 17 19	8 34 10	51 41	+ 8 0*	20 5
54	12 Eridani.	3	1 15 28 7	6 19 40	37 94		22 2
55	ζ Eridani.	3	1 16 2 54	7 17 10	43 70	+ 4 4	19 5
56	α Perſei.	2	1 16 49 50	10 30 00	63 00	0 0	29 4
57	2 τ Arietis.	5	1 17 14 48	8 35 00	51 50	+ 4 7*	20 6
58	f Tauri.	4	1 19 24 48	8 14 50	49 45	− 0 4*	19 7
59	17 Eridani.	4. 5	1 19 40 47	7 25 00	44 50		19 4
60	δ Perſei.	3	1 21 29 11	10 30 01	63 01	+ 2 7	28 5
61	b Plejadum.	5	1 22 40 7	8 50 60	53 06	+10 1*	21 1
62	e Plejadum.	5	1 22 44 32	8 51 90	53 19	+ 7 1*	21 2
63	δ Eridani.	3. 4	1 22 56 33	7 11 90	43 19	− 3 3	19 7
64	d Plejadum.	5	1 23 2 1	8 50 40	53 04	+ 7 2*	21 2
65	η Tauri.	3	1 23 18 58½	8 51 30	53 13	+ 3 8	21 2
66	γ Eridani.	2	1 26 42 35	6 59 40	41 94	− 8 1	20 2
67	1 λ Perſei.	4	1 27 12 6	10 6 50	66 05		30 4
68	A Tauri.	5	1 27 38 1	8 48 20	52 82	− 4 2*	20 9
69	φ Tauri.	5	2 1 24 32	9 10 60	55 06	−12 0*	21 9
70	γ Tauri.	3	2 1 32 28	8 29 00	50 90	− 1 1	20 3
71	χ Tauri.	5	2 2 0 16	9 4 60	54 46	+11 3*	21 7
72	1 δ Tauri.	4	2 2 16 57	8 36 00	51 60	− 0 6	20 6
73	2 δ Tauri.	4	2 2 34 25	8 36 00	51 60	+ 6 0*	20 6
74	1 κ Tauri.	5	2 2 46 34	8 52 80	53 28	+ 5 2*	21 2
75	2 κ Tauri.	5	2 2 47 18	8 52 60	53 26	+ 1 6*	21 2
76	3 δ Tauri.	5	2 2 54 33	8 37 70	51 77	+ 5 4*	20 5
77	1 υ Tauri.	5	2 2 59 43	8 55 00	53 50	+ 3 4*	21 2
78	ε Tauri.	3	2 3 39 29	8 42 00	52 20	− 0 7	20 8

Declinatio.	Variatio 10. Annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille.	Aberratio max. in Declinat.	Longitudo.	Latitudo.
G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
12 54.10 A	—2.40.20	—16 02	+ 0 5	10. 9	0.29.58.32	26. 0.10 A
26 40.16 B	+2.38.00	+15 80		7. 5	1.13.35.20	11.17.25 B
2.12.42 B	+2.38.60	+15 86	— 4 2	8. 3	1. 6. 5.33	12. 0.41 A
9. 5.13 B	+2.38.00	+15 80	— 5 7*	6. 6	1. 8.34.25	5 34.54 A
14.53.15 A	—2.37.70	—15 77		6. 4	1. 0.23.37	28.15.59 A
51.45.43 B	+2.35.00	+15 50		13. 0	1.24.34.22	34.20.43 B
17. 3. 3 B	+2.32.00	+15 20	— 3 2*	6. 1	1.13.33.47½	1.10.30 B
9.51.58 A	—2.31.00	—15 10		10. 5	1. 5.23.22½	24.33. 8 A
20.21.55 B	+2.30.50	+15 05	— 3 0*	6. 3	1.15. 3.40	4.10.43 B
52.32.46 B	+2.29.30	+14 93	— 2 1	12. 7	1.26.40.26	34.29.13 B
3. 8. 0½ B	+2.27.00	+14 70	— 2 8	7. 4	1.10.58. 4	12.36.16 B
40. 0.44 B	+2.26.30	+14 63	— 2 3	9. 7	1.22.49.33	22.24. 4 B
18.48. 7 B	+2.23.10	+14 31	— 4 4*	5. 9	1.17.29.34	1.48. 7 B
20. 8.20 B	+2.21.10	+14 11	+ 3 7*	5. 8	1.18.35.49	2.52.14½ B
29.56.52 A	—2.20.70	—14 07		15. 1	1. 1.10.58	44.44.31 A
9.43.33 A	—2.19.20	—13 92	+ 2 2	10. 2	1.10.28. 5	25.56.53 A
48.59. 9 B	+2.17.20	+13 72	— 0 2	11. 4	1.28.44.17	30. 5.58 B
19.51.58 B	+2.16.20	+13 62	+ 3 7*	5. 5	1.20.17.31	2. 6. 5½ B
12. 5.50 B	+2.10.50	+13 05	— 7 0*	5. 7	1.20.14.21	5.56.27 A
5.54.55 A	—2.10.00	—13 00		9. 5	1.15.29. 5	23.21.50 A
46 59.50 B	+2. 4.90	+12 49	+ 0 5	10. 6	2. 1.27.22	27.16.33 B
23.20.16 B	+2. 1.70	+12 17	— 3 4	5. 2	1.26. 3.46	4. 9.50 B
23.41.44 B	+2. 1.40	+12 14	+ 3 7*	5. 1	1.26.12.55	4.29.40 B
10.35.32. A	—2. 0.80	—12 08	+ 2 7	10. 5	1.17.29.43	28.45. 9 A
23.10.54 B	+2. 0.60	+12 06	— 2 2*	5. 1	1.26.21. 5	3.55.52 B
23.20.38 B	+2. 0.00	+12 00	— 1 6	5. 0	1.26.38.34	4. 1.36 B
14 12.27 A	—1.50.10	—11 01	— 1 7	11. 7	1.20.30.10	33.13.13 A
49.40.31 B	+1.48.60	+10 86		10. 7	2. 6.24.23½	28.51.37 B
21.24.23 B	+1.47.40	+10 74	+ 7 0*	4. 4	2. 0. 5.53	1.14.15 B
26.45.15 B	+1.36.00	+ 9 60	— 0 1*	4. 4	2. 4.33.50	5.46.37 B
15. 1 39 B	+1.36.00	+ 9 60	— 5 3	4. 5	2. 2.26.50	5.45.30 A
25. 2.29 B	+1.34.00	+ 9 40	+ 7 0*	4. 1	2. 4.45.58	3.59.37 B
16.57.31½ B	+1.33.40	+ 9 34	— 6 4	4. 2	2. 3.30 52	3.59.46 A
16.52. 3 B	+1.32.50	+ 9 25	— 4 2*	4. 2	2. 3.46.19	4. 8.14 A
21.43.24 B	+1.31.80	+ 9 18	+ 4 4*	3. 7	2. 4.50.57	0.36. 7 B
21.37.46 B	+1.31.70	+ 9 17	+ 3 1*	3. 7	2. 4.50.35	0.30.27 B
17.21.29 B	+1.31.30	+ 9 13	— 5 6*	3. 8	2 4.10.41	3.42.48 A
22.14 52 B	+1.31.00	+ 9 10	+ 5 7*	3. 7	2. 5. 8.39½	1. 4.51 B
18.37.34 B	+1.29.00	+ 8 90	— 6 0	3. 8	2. 5. 6.27	2.35.37 A

Nr. Stellæ.	Nomen Stellæ & Character.		Afcenfio recta. S. G. M. S.	Variatio 10 Annorum in Afcenfionem rectam. M. S. C.	Variatio annua in Afcenfionem rectam. S. C.	Differentia a de la Caille. S. D.	Aberratio maxima in Afcenfionem rectam. S. D.
79	1 θ Tauri	5	2 3 43 22	8 31 40	51 14	+ 5 3*	20 4
80	2 θ Tauri	5	2 3 44 47	8 31 40	51 14	+ 0 7*	20 4
81	Aldebaran	1	2 5 32 38 7	8 34 10	51 41	+ 0 9	20 6
82	r Tauri	5	2 6 58 5	8 58 20	53 82	+ 5 9*	21 3
83	1 π Orionis	4	2 9 23 16	8 9 70	48 97		20 0
84	7 Camelopardi	5	2 9 31 48	11 54 20	71 42		33 4
85	ι Tauri	4	2 12 11 43	8 56 00	53 60	+17 1*	21 3
86	m Tauri	5	2 13 19 12	8 45 40	52 54	+ 7 8*	20 9
87	105 Tauri	5	2 13 23 58	8 57 00	53 70	+10 5*	21 3
88	h Eridani	3	2 14 1 5	7 23 30	44 33	+ 3 2	20 0
89	Cappella	1	2 14 44 59 5	11 0 30	66 03	+ 4 2	28 7
90	Rigel	1	2 15 45 10 9	7 12 80	43 28	− 4 3	20 1
91	β Tauri	2	2 17 47 7	9 28 00	56 80	+ 1 8	22 6
92	γ Orion.	2	2 18 4 8	8 2 80	48 28	+ 3 5	20 0
93	Tauri	5	2 18 18 35	9 0 00	54 00	+10 5*	21 5
94	2 ψ Orionis	5	2 18 34 9	7 51 70	47 17		20 0
95	β Leporis	3	2 19 29 40	6 27 20	38 72	+ 5 9	21 4
96	δ Orion	2	2 19 56 22	7 40 20	46 02	− 8 3	19 9
97	α Leporis	3	2 20 32 21	6 37 50	39 75	+ 1 4	21 0
98	ζ Tauri	3	2 20 49 43 5	8 58 00	53 80	− 2 7	21 4
99	ε Orionis	2	2 21 0 41	7 37 10	45 71	− 4 6	20 0
100	125 Tauri	5	2 21 13 4	9 17 40	55 74	+ 1 3*	22 3
101	132 Tauri	4	2 23 34 30	9 12 50	55 25	+ 8 2*	21 9
102	γ Leporis	3	2 23 37 3	6 19 10	37 91	+ 0 9	21 6
103	136 Tauri	5	2 24 33 46	9 25 90	56 59	+10 5*	22 6
104	δ Aurigæ	4	2 24 46 44	12 19 20	73 92		34 2
105	1 χ Orionis	5	2 25 2 44	8 55 30	53 53	+12 9*	21 1
106	2 χ Orionis	5	2 25 11 7	8 53 30	53 33		21 1
107	α Orionis	1	2 25 32 47 2	8 7 50	48 75	0 0	20 1
108	ϑ Aurigæ	4	2 25 50 21	10 13 40	61 34	− 1 6	25 0
109	H Geminorum	5	2 27 23 1	9 7 90	54 79	+ 6 2*	21 8
110	κ Aurigæ	5	3 0 1 18	9 35 60	57 56		22 9
111	η Geminorum	4	3 0 5 54	9 5 00	54 50	+ 3 5	21 6
112	μ Geminorum	3	3 2 6 35	9 5 00	54 50	− 2 1	21 7
113	ν Geminorum	4	3 3 40 42	8 56 00	53 60	+12 3*	21 3
114	23 Geminorum	5	3 5 32 4	8 43 40	52 34	+ 0 6*	— —
115	γ Geminorum	2	3 5 57 40	8 41 00	52 10	0 0	20 8
116	26 Geminorum	5	3 7 6 20	8 45 90	52 59	+ 0 7*	22 1
117	ε Geminorum	3	3 7 17 23	9 16 00	55 60	− 9 3	22 1

Nom in figura	Declinatio.	Variatio 10 Annorum in Declinationem.	Variatio annua in Declin.	Differentia a de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
1. ϑ	15.24.31 B	+1.28.70	+ 8.87	− 6. 0*	4. 2	2. 4.35.51	5. 46.17 A
2. ϑ	15.19. 1 B	+1.28.70	+ 8.87	− 8. 9*	4. 2	2. 4.36.13	5 51.55½ A
Al.	16. 0.20 B	+1.23.00	+ 8.30	− 6. 8	3. 8	2. 6.26.10½	5. 29. 2 A
τ	22.28.27 B	+1.18.40	+ 7.84	+ 3. 1*	3. 1	2. 8.48.15	0. 41. 6 B
1. π	8.28. 6 B	+1.10.60	+ 7.06		5. 6	2. 9. 0.56	13.30.39 A
7.C.	53.20.16 B	+1.10.10	+ 7.01		10. 5	2. 15.55.14	30.51.54 B
ι	21.13.29 B	+1. 1.40	+ 6.14	− 0. 9*	2. 8	2. 13.27. 3	1. 13.41 A
m.	18.17.59 B	+0.57.50	+ 5.75	− 6. 0*	2. 9	2. 14. 8.29	4. 15.20 A
105	21.21.48 B	+0.57.30	+ 5.73	− 3. 3*	2. 7	2. 14.32.58	1. 13.14 A
h	5.24.57 A	−0.55.30	− 5.53	+ 4. 7	9. 5	2. 11.56. 0	27.53.16 A
Cap.	45.43.32 B	+0.52.80	+ 5.28	− 2. 0	7. 8	2. 18.30.19	22.51.46 B
R.	8.29.50 A	−0.49.40	− 4.94	+ 3. 9	10. 4	2. 13.28.34	31. 9.10 A
β	28.22.48 B	+0.42.00	+ 4.20	− 1. 9	2. 7	2. 19.13.27	5. 21.59 B
γ	6. 6.39 B	+0.41.50	+ 4.15	+ 0. 4	6. 1	2. 17.35.51	16.10.47 A
ο	21.42.29 B	+0.40.60	+ 4.06	− 1. 2*	2. 0	2. 19. 8.47	1. 19.19 A
2 ψ	2.52. 1 B	+0.39.80	+ 3.98		7. 0	2. 17.49.50	20. 7.15 A
β	20.58. 4 A	−0.36.60	− 3.66	+ 0. 8	13. 9	2. 16.19.24	43.56.26 A
δ	0.29.50 A	−0.35.00	− 3.50	+ 6. 5	9. 9	2 19. 0.14	23.35. 0 A
α	18. 0.43 A	−0.33.00	− 3.30	− 0. 6	13. 2	2. 18. 1.47	41. 5.20½ A
ζ	20.58.22 B	+0.32.00	+ 3.20	− 3 6	1. 8	2. 21.26. 5	2. 13.29 A
ε	1.22.33 A	−0.31.30	− 3.13	+ 3. 7	8. 4	2. 20. 6.49	24.32.15½ A
125	25.44.16 B	+0.30.60	+ 3.06	+ 1. 7*	1. 8	2. 22. 5.14	2. 30.28 B
132	24.27.43 B	+0.22.50	+ 2.25	+ 0. 2*	1. 1	2. 24. 9.10	1. 7.21 B
γ	22.32.47 A	−0.22.30	− 2.23	+13. 7	14. 4	2. 21.31.38	45.49.43 A
136	27.31.51 B	+0.19.00	+ 1.90	+13. 7*	1. 8	2. 25.19. 2	4. 9. 6 B
δ	54.14. 7 B	+0.17.70	+ 1.77		10. 3	2. 26.26.56	30.49.43 B
1. χ	20.12.31 B	+0.18.30	+ 1.83	− 1. 0*	1. 6	2. 25 18.46	3. 10.49 A
2. χ	19.40.17 B	+0.16.80	+ 1.68	− 0. 5*	1. 7	2. 25.27.26	3. 43.21 A
x	7.20.25 B	+0.15.60	+ 1.56	− 5. 6	5. 6	2. 25.24.13	16. 3.31 A
9	37.10. 8 B	+0.14.00	+ 1.40	+ 0. 9	4. 8	2. 26.35.15	13.44.54 B
H.	23.15. 8 B	+0. 9.10	+ 0.91	− 2. 0*	0. 9	2. 27.35.46½	0. 11.45 A
κ	29.33.41 B	−0. 0.60	− 0.06		2. 1	3. 0. 1. 8½	6. 5.29 B
η	22.33. 8 B	0 0. 0. 0	0.00	− 6. 2	0. 6	3 0. 5.27	0. 55. 4 A
μ	22.36.46 B	−0. 7. 0	− 0.70	− 4. 5	0. 6	3. 1.56.52	0. 50.34 A
ν	20.20.25 B	−0.13.00	− 1.30	+ 3. 8*	1. 5	3. 3.27.13	3. 5. 8 A
23	— — —	−0.19.20	− 1.92	— — —	— —	— — — —	— — —
γ	16.34.51 B	−0.21.00	− 2.10	− 7. 5	2. 5	3. 4.45.10	6. 46.12 A
26	17.51.27 B	−0.24.80	− 2.48	− 4. 3*	2. 0	3. 6.47.32½	5. 26.41 A
ε	25.20.40 B	−0.25.00	− 2.50	+ 2. 5	1. 3	3. 6.35.20	2. 2.28 B

Nr. stellæ	Nomen stellæ & character		Ascensio recta	Variatio 10 Annorum in Ascensionem rectam.	Variatio annua in Ascensionem rectam.	Differentia a de Caille.	Aberratio maxima in Ascensionem rectam.
			S. G. M. S.	M. S. C.	S. C.	' S. D.	S. D.
118	28 Geminorum	5	3 7 23 5	9 32 90	57 29		22 9
119	Syrius	1	3 8 38 36 8	6 43 50	40 35	− 1 1	20 8
120	ζ Geminorum	4	3 12 27 57	8 56 70	53 67	+ 3 8	21 5
121	51 Geminorum	5	3 14 53 40	8 39 40	51 94	+ 6 6*	20 7
122	19 Lyncis	5	3 15 48 8	12 24 80	74 48		35 2
123	λ Geminorum	5	3 16 4 22	8 40 60	52 06	+11 0*	20 8
124	δ Geminorum	3	3 16 26 38	9 2 00	54 20	+ 2 5	21 3
125	q Geminorum	5	3 16 56 31	8 55 00	53 50	+ 6 2*	21 3
126	ι Geminorum	5	3 17 42 2	9 24 50	56 45	+19 5*	22 5
127	p. Geminorum	5	3 18 22 8	8 58 40	53 84	+19 8*	21 4
128	η Canis majoris	2	3 18 39 8	5 57 20	35 72	+10 0	22 7
129	Castor	1	3 19 48 45 7	9 41 50	58 15	− 1 7	23 4
130	υ Geminorum	4	3 20 16 33	9 19 40	55 94	+ 3 7*	22 3
131	f Geminorum	5	3 21 24 2	8 43 30	52 33	− 0 9*	20 8
132	Procyon	1	3 21 40 56 8	8 0 80	48 08	+ 3 0	19 9
133	κ Geminorum	5	3 22 28 59	9 8 10	54 81	+ 1 5*	21 9
134	Pollux	1	3 22 39 3 7	9 22 70	56 27	+ 4 5	22 4
135	g Geminorum	5	3 23 3 12	8 45 70	52 57	+13 7*	20 8
136	26 Lyncis	5	3 24 17 24	11 5 90	66 59		29 6
137	Φ Geminorum	5	3 24 41 34	9 16 10	55 61	+ 6 7*	22 2
138	3 Cancri	5	3 26 57 4:	8 43 00	52 30		20 9
139	μ Cancri	7	3 28 0 54	8 58 10	53 81		20 2
140	2.ψ Cancri	4	3 28 59 26	9 8 30	54 83	+ 8 9*	21 8
141	β Cancri	3	4 0 52 13	8 11 90	49 19	− 1 3	19 9
142	ϑ Cancri	5	4 4 28 16	8 38 50	51 85	+ 7 1*	20 5
143	η Cancri	5	4 4 41 53	8 46 10	52 61		20 8
144	γ Cancri	4	4 7 20 30	8 47 20	52 72	− 2 1	21 0
145	δ Cancri	4	4 7 45 17	8 36 50	51 65	− 5 5	20 5
146	ι Ursæ majoris	4	4 10 40 2	10 36 60	63 66	+15 8	29 5
147	1.α Cancri	4	4 10 42 0	8 16 00	49 60		19 8
148	2.α Cancri	4	4 11 20 6	8 16 00	49 60	+ 3 0*	19 8
149	κ Cancri	5	4 13 40 53	8 11 70	49 17		19 6
150	ξ Cancri	6	4 13 52 48	8 43 00	52 30	+ 3 5*	21 0
151	ω Leonis	5	4 18 53 50:	8 5 30	48 53	− 1 4*	19 3
152	α Cor. Hydræ	2	4 18 56 57	7 24 10	44 41	− 4 2	19 2
153	ϑ Ursæ maj.	4	4 19 10 9	10 34 20	63 42	− 7 4	31 8
154	ξ Leonis	4	4 19 44 49	8 10 30	49 03	+ 3 9*	19 4
155	10 Leonis	5	4 21 7 48	7 59 80	47 98	− 0 2*	19 2
156	ο Leonis	4	4 22 4 50	8 4 80	48 48	+ 2 9	19 4

Nomen stellæ	Declinatio.	Variatio 10 Annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille	[illegible]rratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
28	29 11.18. B	—0.25.80	— 2.58		2. 2	3. 6.28.37	5.53. 4 B
Syr	16.24. 7. A	+0.30.10	+ 3.01	— 9 7	12. 8	3.10.46.34	39.32.55 A
ζ	20.53.58. B	—0.43.30	— 4.33	— 5. 0	2. 1	3.11.38.29	2.‵4. 4 A
51	16.32.38. B	—0.51.60	— 5.16	— 3. 9*	3. 1	3.14.20.59	6.11.11 A
19	55.42 11. B	—0.54.60	— 5.46		11. 2	3.10.31.10	32.48.33½ B
λ	16 57. 5 B	—0.55 50	— 5.55	— 3. 6*	2. 8	3.15.26. 2½	5.39.38 A
δ	22.24. 6. B	—0.57.00	— 5.70	— 4 6	2. 7	3.15.10.19	0.12.19 A
q	20 52,26. B	—0.58 40	— 5.84	— 4. 1*	2. 6	3.15.48.24	1.40.13 A
ι	28.15. 6. B	—1. 1.00	— 6.10	+ 3. 7*	3. 3	3.15.36 54	5.44.14 B
p	21.54.48. B	—1. 3 20	— 6.32	— 0. 5*	2. 7	3.17. 0 1	0.28.41 A
η	28.50.57. A	+1. 4.20	+ 6.42	— 3. 7	15. 5	3.26.12.34	50.38. 1 A
Cast	32.23.24. B	—1. 8.00	— 6.80	— 4. 0	4. 3	3.16 53.59	10. 4.35 B
υ	27.24.24. B	—1. 9.50	— 6.95	+ 0. 5*	3. 3	3.18. 0.31	5.11.53 B
f	18.11.59. B	—1.13.00	— 7.30	— 7. 3*	3. 3	3.20.19.38½	3.46.15 A
Proc	5.49.24. B	—1.14.20	— 7.42	— 4. 0	6. 1	3.22.28.37½	15.58. 8 A
κ	24.57. 6. B	—1.16 70	— 7.67	— 0. 5*	3. 3	3.20.19. 0	3. 3.20 B
Pol	28.35. 3. B	—1.17.20	— 7.72	— 2. 5	3. 7	3.19.54.24	6.40. 4½ B
g	19. 4.28. B	—1.18.50	— 7.85	— 3. 0*	3. 4	3 21.44.45	2.40.12 A
26	48. 9.42. B	—1.22.50	— 8.25		9. 3	3.17.48.15	26.11. 2 B
φ	27.21.54. B	—1.23.80	— 8.38	+ 7. 9*	3. 9	3.21.53 37	5.45.17 B
3	18.52.57. B	—1.30.90	— 9.09		3. 8	3.25.24.53	3.14.18 A
μ	23.18. 3. B	—1.34.20	— 9.42		4. 7	3 25.34.41	2.17.23 B
2.ψ	26.13. 1. B	—1.37.30	— 9.73	+ 5 9*	4. 3	3 25.53.34	5.19. 7 B
β	9.54 25. B	—1.42.90	—10.29	— 1. 1	5. 3	4. 0.54.47	10.18.28 A
ϑ	18 53 16. B	—1 55.30	—11.35	— 4. 8*	4. 5	4. 2.22.56	0.47.11 A
η	21.14.20. B	—1 53.70	—11.37		4. 7	4. 2. 3.30	1.33. 7 B
γ	22.18.51. B	—2. 1 70	—12.17	— 6. 3	4. 9	4. 4.11.41	3.10.22 B
δ	19. 1.12. B	—2. 3.80	—12.38	— 6. 8	4. 8	4. 5.22 12	0. 4.16 B
ι	48.57.57 B	—2.10.70	—13 07	+ 5. 2	11. 0	3. 0.31.58	29 34.35½ B
1. α	12.31.37. B	—2.12.00	—13 20		5. 8	4. 9.45.21	5.29.50 A
2. α	12 46 16. B	—2.13 00	—13.30	— 8. 0	5. 7	4.10.17.31	5. 5.58 A
κ	11.37 8. B	—2.18.50	—13.85		5. 7	4.12.49.20	5.35.19 A
ξ	23. 0. 3 B	—2.19.00	—13.90	— 8. 9*	5. 9	4. 9.51.31	5 24 12 B
ω	10. 5.18. B	—2.31.10	—15.11	— 4. 4*	6. 3	4.18.11.37½	5.34.21 A
α	7.37.48. A	+2 31.30	+15.13	+ 4. 8	18. 3	4 23.56.36	22.23.51 A
ϑ	52.45.25. B	—2.31.80	—15.18	+ 1. 8	10. 4	4. 3.57.23	34.56. 0 B
ξ	12.20.55.½ B	—2.33.10	—15.31	— 3. 0*	6. 3	4.18.18.13	3. 9 57 A
10	7 54. 2. B	—2.33.30	—15 33	— 1. 8*	6. 7	4.19.45.55	7.22.13 A
ο	10.58.19. B	—2.38.30	—15.88	— 6. 0	6. 5	4.20.54.28	3.46. 1 A

Nr. stellæ.	Nomen stellæ & character.		Ascensio recta.	Variatio 10 Annorum in Ascensionem rectam.	Variatio annua in Ascensionem rectam.	Differentia a de la Caille.	Aberratio maxima in Ascensionem rectam.
			S. G. M. S.	M. S. C	S. C.	S. D.	S. D.
157	ε Leonis	3	4 23 2 44	8 37 60	51 76	+ 0 9	20 9
158	ν Leonis	5	4 26 19 20	8 10 30	49 03	+ 3 1*	19 4
159	π Leonis	4	4 26 52 44	7 59 60	47 96	+ 2 6*	19 1
160	η Leonis	4	4 28 33 18	8 15 70	49 57	+ 2 6	19 8
161	A Leonis	5	4 28 47 16	8 2 40	48 24	+ 3 7*	19 1
162	Regulus	1	4 28 53 32 5	8 6 00	48 60	+ 1 1	19 4
163	ξ Leonis	3	5 0 49 28	8 26 70	50 67	+ 7 3	20 6
164	γ Leonis	2	5 1 40 35	8 18 40	49 84	+ 9 0	20 1
165	μ Ursæ majoris	3	5 1 59 9	9 8 70	54 87		25 4
166	ρ Leonis	4	5 5 2 25	7 57 50	47 75	— 0 2	18 9
167	48 Leonis	5	5 5 34 0	7 53 80	47 38		18 8
168	37 Sextantis	6	5 8 23 42	7 52 00	47 20		18 8
169	38 Sextantis	6	5 8 42 21	7 52 00	47 20		18 8
170	55 Leonis	5	5 10 50 19	7 44 10	46 41	— 4 1*	18 5
171	56 Leonis	6	5 10 53 17	7 52 00	47 20	0 0*	18 7
172	β Ursæ majoris	2	5 11 47 56	9 20 80	56 08	+ 4 2	34 6
173	d Leonis	5	5 12 2 29	7 47 00	46 70	+ 6 1*	18 6
174	c Leonis	5	5 12 4 30	7 50 00	47 00	+ 5 6*	18 6
175	α Ursæ majoris	1.2	5 12 10 35	9 42 50	58 25	+ 2 8	41 2
176	χ Leonis	5	5 13 9 26	7 50 70	47 07	+ 4 8*	18 7
177	δ Leonis	3	5 15 19 38	8 2 20	48 22	+ 4 1	19 9
178	9 Leonis	3	5 15 24 23	7 57 00	47 70	+ 6 7	19 3
179	75 Leonis	5	5 16 14 1	7 44 60	46 46	— 1 6*	18 5
180	76 Leonis	5	5 16 38 57	7 44 20	46 42		18 5
181	σ Leonis	5	5 17 11 17	7 47 50	46 75	— 2 4*	18 6
182	79 Leonis	5.6	5 17 55 51	7 44 00	46 40	+ 5 2*	18 4
183	r Leonis	4	5 18 53 51	7 44 60	46 46	—20 2*	18 4
184	e Leonis	5	5 19 30 53	7 40 80	46 08		18 4
185	υ Leonis	4	5 21 9 57	7 42 00	46 20		18 4
186	1.ξ Virginis	5	5 23 13 35	7 45 80	46 58	—2 1*	18 6
187	ο Virginis	5	5 23 22 41	7 45 00	46 50	—17 5*	18 6
188	β Leonis	1.2	5 24 11 59	7 44 60	46 46	— 1 2	19 1
189	β Virginis	3	5 24 32 53	7 43 00	46 30	+ 6 3	18 4
190	γ Ursæ majoris	2	5 25 16 25	8 5 40	48 54	+ 8 0	32 3
191	π Virginis	5	5 27 8 28	7 43 20	46 32	—11 2*	18 6
192	δ Ursæ majoris	3	6 0 51 27	7 37 00	45 70	— 1 7	35 3
193	γ Corvi	3	6 0 52 30	7 42 00	46 20	± 4 3	19 1
194	n Virginis	5	6 1 35 43	7 41 80	46 18	0 0*	18 3
195	η Virginis	3	6 1 54 33	7 42 00	46 20	+ 3 1	18 3

	Declinatio	Variatio 10 annorum in Declinationem.	Variatio annua in Declin.	Differentia a de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S C.	S. D.	S. D.	S. G. M. S.	G. M. S.
ε	24.52. 0 B	—2.40 30	—16.03	+ 0. 7	7.4	4.17.21.11	9.41.59 B
ν	13.34.43 B	—2.46.90	—16.69	— 2. 9*	6 6	4 23.59.22	0. 2.22 B
π	9 11. 8 B	—2.47.90	—16.79	— 4. 2*	6.9	4.25.58. 2	3.55.20 A
ο	17.55.22 B	—2.51.10	—17.11	— 8. 4	7.0	4.24.33.13	4.51. 9 B
A	11. 9.49 B	—2.51.50	—17.15	— 5. 6*	6.9	4 27. 4.10	1.25.33 A
Reg	13. 7 50 B	—2.51.70	—17.17	—10. 1	6.8	4.26.29.39	0.27.27 B
ζ	24.36 11 B	—2 55.10	—17.51	— 2. 3	7.9	4.24.12.30½	11.51. 2½B
γ	21. 2.47 B	—2.56 60	—17.66	— 7. 0	7.6	4.26.14.17	8.48.15½B
μ	42.41.50 B	—2.57.00	—17.70		12.0	4.17.52.42	28.58.56 B
ρ	10.32. 3 B	—3. 1.70	—18.17	— 4. 6	7.4	5. 3. 2.26	0. 8.29 B
48	8 10.55 B	—3. 2.60	—18.26		7.4	5. 4.22.34	1.51.49 A
37	7.36 50 B	—3. 6.00	—18.60		7.4	5. 7 11.31	1.21.53 A
38	7.36.17 B	—3. 6.00	—18.60		7.4	5. 7.28.54	1.15.32 A
55	2. 0.39 B	—3. 9.40	—18.94	— 3. 4*	7.9	5.11.33.16½	5.39. 1 A
56	7.27.34 B	—3. 8.00	—18.80	— 5. 5*	7 7	5. 9.32.35	0.35. 7 A
β	57.39 46 B	—3.10.50	—19.05	— 0. 5	16.0	4.16. 3.19	45. 6.39 B
d	4.54. 5 B	—3.11.00	—19.10	— 0. 9*	7.6	5.11.34.17	2.31.14 A
c	7.23. 6 B	—3 10.00	—19.00	— 5. 8*	7.6	5.10 39.38	0.12.34½A
α	63. 2 27 B	—3 10.90	—19.09	— 2. 7	17.0	4.11.49.33½	49.40.10 B
χ	8.37 43 B	—3.11.90	—19.19	— 5. 6*	7.6	4.11 10.45	1.20.53 B
δ	21.50. 7 B	—3.14.00	—19.49	— 3. 5	9.0	5. 7.56.43	14.19.52 B
ϑ	16.44.14 B	—3.14.00	—19.40	— 8. 2	8.2	5.10. 4.13	9.40.30 B
75	3.19 38 B	—3 14.80	—19.48	— 1. 6*	7.8	5.16. 2.27	2.22.17 A
76	2.57.45 B	—3.15.10	—19.51		7.8	5.16.33 55	2.32.49 A
σ	7.20.29 B	—3 15.60	—19.56	— 6. 4*	7 9	5 15.21.37	1.41.50 B
79	2.43.20 B	—3.16.00	—19.60	— 4. 9*	7.9	5.17.50.21	2.16 14 A
τ	4.10.32 B	—3.16.80	—19.68	— 4. 0*	7.9	5.18. 9.37	0.33.21 A
e	1.40.55 A	+3 17.20	+19.72		8.2	5.21. 1.44	5.42.10 A
υ	0.29.58 B	—3.18.00	—19.80		8.0	5.21.41.22	3. 2.51 A
I	9.35.26 B	—3.19.10	—19.91	— 1. 8*	8.3	5.19.58.42	6. 6.50 B
ν	7.52.25 B	—3.19.20	—19 92	— 0. 6*	8.2	5.20.48. 6	4.35.52 B
β	15 54.47 B	—3.19.50	—19.95	— 3. 7	8.9	5.18.17.17	12.17. 8 B
[illegible]	3. 7. 3 B	—3.20.00	—20.00	— 2. 7	8.0	5.23.45.37	0.41.36 B
γ	55. 1.44 B	—3.19.90	—19.99	— 2. 8	16.6	4.27. 5.26	47. 7.28 B
π	7.57. 9 B	—3.20 30	—20.03	— 6. 7*	8.3	5.24.12.13	6. 9.21 B
δ	58.22. 6 B	—3.20.50	—20.05	+ 1. 4	17.4	4.27.39.52	51.38.36 B
γ	16.12.27 A	+3.20.40	+20.04	— 3. 5	9.4	6. 7.23.41	14.29.17 A
[illegible]	0.32.58½B	—3.20.50	—20.05	— 1. 5*	8.0	6. 1.11.50	1.14.57 B
[illegible]	0.40. 7 B	—3.20.00	—20.00	— 9. 0	8.0	6 1.29. 6	1.22.24 B

Nr. stellæ.	Nomen stellæ.		Ascensio recta. S. G. M. S	Variatio 10 annorum in Ascensionem rectam. M. S. C.	Variatio annua in Ascensionem rectam. S. C	Differentia a de la Caille. S. D.	Aberratio maxima in Ascensionem rectam. S. D.
196	c Virginis	5	6 2 2 32	7 41 00	46 10	+ 1 9*	18
197	κ Draconis	3	6 5 46 32	6 42 80	40 28		56
198	χ Virginis	5	6 6 43 19	7 44 50	46 45	+ 0 7*	18
199	γ Virginis	3	6 7 22 47	7 42 00	46 20	— 4 1	18
200	ψ Virginis	5	6 10 28 32	7 47 00	46 70	— 0 8*	18
201	δ Virginis	3	6 10 52 54	7 38 70	45 87	— 2 8	18
202	ε Virginis	3	6 12 33 31	7 34 20	45 42	— 2 5	18
203	g Virginis	5	6 13 50 21	7 49 70	46 97	— 4 6*	18
204	ϑ Virginis	4	6 14 23 16	7 45 60	46 56	+ 2 6	18
205	Spica Virginis	1	6 18 8 44 .1	7 52 70	47 27	— 0 6	18
206	ι Virginis	4	6 18 31 4	7 54 80	47 48	— 6 4*	18
207	ζ Ursæ majoris	3	6 18 33 12	6 6 50	36 65	+ 6 8	33
208	21. Virginis	5	6 19 52 44	7 47 70	46 77	— 0 7*	18
209	m. Virginis	5	6 22 15 44	7 51 70	47 17	— 0 7*	18
210	η Ursæ majoris	2	6 24 31 1	6 0 80	36 08	+11 3	29
211	α Draconis	2	6 29 28 28	4 5 00	24 50	— 4 6	45
212	κ Virginis	4	7 0 1 50	7 44 50	46 45	+ 7 1	19
213	Arcturus	1	7 1 10 53 0	7 3 20	42 32	+ 3 4	20
214	λ Virginis	4	7 1 32 26	8 4 70	48 47	— 0 2	19
215	ϑ Bootis	4	7 4 15 32	5 12 20	31 22		31
216	μ Libræ	5	7 9 3 4	8 11 10	49 11	+ 0 5*	19
217	α Libræ	2	7 9 24 42 5	8 16 00	49 60	+ 2 3	19
218	2.ξ Libræ	5	7 10 56 46	8 5 90	48 59	— 3 5*	19
219	18 Libræ	5	7 11 29 16	8 5 50	48 55	+ 3 2*	19
220	β Ursæ minoris	3	7 12 55 17	—0 52 80	—5 28	+14 9	75
221	1. ν Libræ	5	7 13 19 19	8 19 30	49 93	+ 0 7*	19
222	1. ι Libræ	3	7 14 38 51	8 30 00	51 00	+ 1 0*	20
223	β Libræ	2	7 16 1 57½	8 3 30	48 33	+ 3 6	19
224	4. ζ Libræ	4	7 19 51 0	8 21 10	50 11	+ 2 2*	20
225	γ Libræ	3.4	7 20 32 5	8 20 00	50 00	— 0 6	20
226	α Coronæ Boreal.	2	7 21 8 6	6 20 50	38 05	+ 2 5	22
227	42 Libræ	5	7 21 32 12	8 48 20	52 82		21
228	κ Libræ	4	7 22 2 34	8 36 00	51 60	— 5 0*	20
229	α Serpentis	2	7 23 7 0	7 21 50	44 15	— 2 6	19
230	1. A. Scorpion	5	7 24 48 51	8 56 50	53 65		21
231	λ Libræ	4	7 24 51 40	8 39 70	51 97	+ 1 4*	20
232	ϑ Libræ	4	7 25 2 58	8 30 10	51 01	+ 1 0*	20
233	ρ Serpentis.	3	7 25 11 3	6 36 20	39 62		20
234	π Scorpii	3	7 26 5 47	9 0 90	54 09	+ 5 8	21

Nomen Stellæ.	Declinatio.	Variatio 10 annorum in Declinationem.	Variatio annua	Differentia a de la Caille.	aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S	G. M. S.
c	4.39. 2 B	—3.20 40	—20.04	— 13.2*	8. 2	6. 0. 1. 0	5. 4.42 B
κ	71. 6.52 B	—3.19.60	—19.96		19. 3	4.12.52. 1½	61.44.47½B
χ	6.40.13 A	+3.19.20	+19.92	— 10.1*	8. 0	6. 8.48.40½	3.27.13½A
γ	0. 7.44 A	+3.19.00	+19.90	+ 5 0	8. 0	6. 6. 49.31	2.48.57 B
ψ	8.13.47 A	+3.17.20	+19.72	— 7.8*	7. 9	6.12.51.13	3 25. 8 A
δ	4.42.27 B	—3.17.00	—19.70	— 5.4	8. 3	6. 8. 8. 4	8 38.20 B
ε	12.15.17 B	—3.15.70	—19.57	— 4.3	9. 5	6. 6.36. 2	16.13.11 B
g	9.27 1 A	+3.14.80	+19.48	+ 0.1*	7. 8	6.16.23.46	3.14.48 A
ϑ	4.15. 4 A	+3.14.30	+19.43	+ 4.8	7. 9	6.14.53.19	1.45.33 B
Sp.	9.54. 4 A	+3. 9.70	+18.97	+ 3.9	7. 6	6.20.29.40	2. 2.11 A
ι	11 27. 2 A	+3.10.10	+19.01	— 3.8*	7. 7	6.21.25.13	3.19.56 A
ζ	56.11. 6 B	—3.10.10	—19.01	— 1.8	18. 3	5.12.17.26	56.22.10 B
21	5. 0.29 A	+3. 8.60	+18.86	+ 3.5*	7. 6	6.20.14.56	3. 8.43 B
m	7.28.58 A	+3. 5.60	+18.56	— 8.9*	7. 4	6.23.21.55½	1.43.39 B
η	50.31. 8 B	—3. 2.40	—18 24	— 0.7	17. 9	5.23.33. 6½	54.23.45 B
α	65.31.43 B	—2.54.60	—17.46	— 1.9	19. 6	5. 4. 2.46	66.21.15 B
κ	9. 8.40 A	+2.53.70	+17.37	+ 4.8	7. 1	7. 1. 8.39	2.55.26½B
Arc	20.26.32 B	—2.51.60	—17.16	— 2.9*	12. 3	6.20.53.12	30.54.10½B
λ	12.15.12 A	+2.51.00	+17.10	— 2.4	6. 9	7. 3.36.13	0.30.39 B
ϑ	52.58.11 B	—2.45.80	—16.58		18. 5	5.29.11.51	60. 8.50 B
μ	13. 8. 3 A	+2.35.80	+15.58	+ 8 6*	6. 3	7.10 49.15	2. 3.30½B
κ	15. 1.45 A	+2.35.00	+15.50	+ 1.7	6. 3	7.11.44.19	0 21.48 B
2ξ	10.25.31 A	+2.31.50	+15.15	+ 5.0*	6. 3	7.11.45.39	5.12.17 B
18	10. 9.48 A	+2.30.30	+15.03	— 5.1*	6. 3	7.12.11.32	5.36.53 B
β	75. 8 17 B	—2.26.80	—14.68	— 7.4	20. 0	4. 9.53.18	72.58 10 B
1ν	15.18.35 A	+2.25.90	+14.59	— 8.5*	6. 1	7.15.25.27	1.13.26½B
1ι	18.51.59 A	+2 22.70	+14.27	+ 1.3*	5. 8	7.17.39.27	1.49.14 A
β	8.28.52 A	+2.19.30	+13.93	+ 4.0	6. 4	7.16. 1.35	8.31.28 B
4ζ	16. 1.12 A	+2. 8.90	+12.89	— 9.0*	5. 3	7.21.40.56	2.15.56 B
γ	13.58.15 A	+2. 7.00	+12.70	+ 1.0	5. 6	7.21 46.59	4.24.41 B
α	27.32.11½B	—2. 6.00	—12.60	— 4.0	14. 7	7. 8.54.48	44.21. 0 B
42	23. 1. 3 A	+2. 4.80	+12.48		5. 2	7.24.58.22	4. 6.31 A
κ	18.52.51 A	+2. 3.40	+12.34	— 7.3*	4. 9	7.24.24.37	0. 1. 1 B
α	7.11.49 B	—2. 0.30	—12,03	— 5.0	9. 8	7.18 42.32	25.31.44 B
1A	24.35.22 A	+1.55.60	+11.56		5. 1	7.28.16.14	4 55. 0 A
λ	19.25.49 A	+1.55.40	+11.54	+ 6.7*	4. 6	7.27. 7.36	0. 6.53 B
ϑ	16. 0.18 A	+1.55.00	+11.50	+ 8.5*	4. 9	7.26.31. 2	3.29.24 B
ρ	21.42.51 B	—1.54.50	—11.45		13. 6	7.16. 9.24	40. 1.35½B
κ	25.23.41 A	+1.51.90	+11.19	— 24.8	4. 9	7.29.35.25	5.26.15 A

Nr. Stella.	Nomen Stellæ & Character.		Ascensio recta.	Variatio 10 annorum in Ascensionem rectam.	Variatio annua in Ascensionem rectam	Differentia a de la Caille.	Aberratio maxima in Ascensionem rectam.
			S. G. M. S.	M. S. C.	S. C.	S. D.	S. D.
235	ψ Libræ	4	7 26 11 53	8 22 00	50 20	+ 5 5*	20 2
236	δ Scorpii	3	7 26 32 47	8 49 00	52 90	+ 4 2	21 0
237	β Scorpii	2	7 27 52 49	8 41 00	52 10	− 3 1*	20 6
238	1 ω Scorpii	5	7 28 12 9	8 43 60	52 36	+ 0 5*	21 1
239	2 ω Scorpii	5	7 28 20 37	8 44 40	52 44	+ 1 9*	21 1
240	υ Herculis	5	7 28 50 11	8 39 70	27 97		28 7
241	ν Scorpii	4	7 29 31 18	8 40 70	52 07	+ 5 0	20 7
242	δ Ophiuchi	3	8 0 26 54	7 51 10	47 11	− 9 0	19 6
243	19 Scorpii	5	8 1 33 35	7 58 70	53 87		21 4
244	σ Scorpii	4	8 1 39 40	9 4 20	54 42	− 1 4*	21 6
245	ψ Ophiuchi	5	8 2 31 27	8 44 40	52 44	+ 1 1*	20 8
246	g Ophiuchi	5	8 2 48 34	8 56 80	53 68	+ 3 9*	21 4
247	α Antares	1	8 3 41 0 9	9 8 90	54 89	+ 0 6*	21 9
248	φ Ophiuchi	4	8 4 21 24	8 34 00	51 40	− 4 2*	20 5
249	ω Ophiuchi	5	8 4 29 14	8 50 80	53 08	+ 3 6*	21 1
250	τ Scorpii	4	8 5 14 48	9 17 40	55 74	+ 1 4	22 2
251	24 Scorpii	5	8 6 55 47	8 39 10	51 91	— — —	— —
252	A Ophiu. duplex	5	8 15 9 24	9 17 00	55 70		22 2
253	μ Draconis	4	8 15 49 0	3 6 30	18 63		34 6
254	α Herculis	3	8 15 55 45	6 50 90	41 09	+ 0 8	20 6
255	ρ Ophiuchi	4	8 16 39 35	8 56 10	53 61	− 0 9*	21 3
256	ϑ Ophiuchi	3	8 16 49 28	9 12 00	55 20	+ 1 8	21 8
257	43 Ophiuchi	5	8 17 4 19	9 24 90	56 49		22 6
258	B Ophiuchi	4	8 17 56 4	9 8 90	54 89		21 8
259	e Ophiuchi	5	8 19 11 56	9 8 30	54 83		21 8
260	α Ophiuchi	2	8 20 57 4	6 53 00	41 30	+ 1 3	20 4
261	μ Ophiuchi	4	8 21 12 13	8 9 60	48 96		20 2
262	β Draconis	3	8 21 15 28	3 23 60	20 36	+ 4 0	32 8
263	D Ophiuchi	5	8 22 15 59	9 0 00	54 00	− 4 5*	21 5
264	p Sagittarii	3	8 23 7 5	9 26 50	56 65		22 6
265	b Sagit. dupl.	5	8 26 17 18	9 9 40	54 94		21 9
266	γ Sagittarii	3.4	8 27 36 0	9 40 00	58 00	− 2 6	23 1
267	γ Draconis	2	8 27 45 50	3 25 60	20 56	+ 21 3	32 2
268	1 μ Sagittarii	4	8 29 51 13	8 59 10	53 91	+ 0 7	21 4
269	2 μ Sagittarii	4	9 0 13 35	8 59 00	53 90	− 0 6*	21 4
270	δ Sagittarii	3	9 1 24 27½	9 37 90	57 70	+ 10 9	23 1
271	ε Sagittarii	2	9 2 3 44	9 59 50	59 95	+ 3 1	24 2
272	λ Sagittarii	4	9 3 17 32	9 17 50	55 75	+ 8 2	22 3
273	α Lyræ	1	9 7 12 11 0	5 3 20	30 32	+ 1 1	25 6

	Declinatio.	Variatio 10 annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
	G. M. S.	M S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
	13.34. 2 A	+1.51.50	+11.15	+ 4. 5*	5.0	7.27. 3. 3	6. 6.56 B
δ	21.55. 2 A	+1.50.00	+11.00	— 2. 3	4.8	7.29.13.18	1.57.17 A
β	19. 7.40 A	+1.47.00	+10.70	+ 0. 1	4.3	7.29.50.23	1. 2.18 B
1. ω	19.59.53 A	+1.45.60	+10.56	+ 0. 3*	4.3	8. 0.19.13	0.15. 5 B
2. ω	20.11.58 A	+1.45.20	+10.52	+ 0. 5*	4.3	8. 0.29.31	0. 4.57 B
υ	46.42.31 B	—1.43.50	—10.38		18.5	7. 4.59. 5	64.20. 7 B
	18.48.53 A	+1.41.60	+10.16	— 0. 6	4.2	8. 1.17.40	1.39.52 B
	3. 3.27 A	+1.38.90	+ 9.89	+ 2. 7	7.1	7.28.56.58	17.16.56 B
	23.34. 2 A	+1.35.50	+ 9.55		4.0	8. 4. 5.20	2.37.20½ A
	24.59.41 A	+1.35.30	+ 9.53	+ 6. 6*	4.1	8. 4.27. 3	4. 0.23 A
	19.27.17 A	+1.32.50	+ 9.25	+ 6. 0*	3.8	8. 4.12. 7	1.35. 6½ B
	22.52.18 A	+1.31.60	+ 9.16	— 6. 5*	3.7	8. 5. 5.19	1.43.31 A
	25.52.34 A	+1.28.90	+ 8.89	— 1. 4	4.0	8. 6.24.48	4.32.17 A
	16. 4. 2 A	+1.26.90	+ 8.69	+ 1. 4*	3.3	8. 5.19. 0	5.13.47 B
	20.55.51 A	+1.26.40	+ 8.64	+ 5. 9*	3.6	8. 6.15.40	0.27.36 B
	27.41.42 A	+1.24.10	+ 8.41	+ 6. 7	4.0	8. 8. 6.32	6. 5.21 B
	— — — —				— —	— — — — —	— — — —
	26.13.22 A	+2.51.40	+ 5.14		2.6	8.16.41.22½	3.26.13 A
	54.47.33 B	—0.49.10	— 4.91		19.2	7.22.58.35	76.25.53½ B
	14.40.55 B	—0.48.70	— 4.87	— 2. 7	12.4	8.12.48. 0	37.18.53 B
	20.49.50 A	+0.46.30	+ 4.63	+ 3. 2*	2.3	8.17.32.17	2. 3.48½ B
	24.44. 2 A	+0.45.70	+ 4.57	— 0. 9	2.2	8.18. 2.45	1.48.35 A
43	27.53. 2 A	+0.44.90	+ 4.49		2.7	8.18.33. 6	4.55.37 A
B	23.55.44 A	+0.41.90	+ 4.19		1.7	8.18.59. 1	0.55.11 A
	23.45. 8 A	+0.37.60	+ 3.76		1.6	8.20. 7.22	0.39. 9 A
	12.45.11 B	—0.31.50	— 3.15	— 5. 8	11.7	8.19. 5.12	35.52.49 B
	7.57. 6 A	+0.30.70	+ 3.07		5.5	8.20.58. 7	15.14.34 B
	52.29.19 B	—0.30.50	— 3.05	— 0. 3	19.8	8. 8.35.32	75.18.30 B
	21.32.32 A	+0.27.10	+ 2.71	+ 5. 5*	1.6	8.22.48.22½	1.44. 6½ B
	27.42.45 A	+0.24.10	+ 2.41		2.0	8.23.53.34	4.23.19 A
	23.46. 6 A	+0.13.00	+ 1.30		0.8	8.26.36.12½	0.20.32 A
	30.23.57 A	+0. 8.40	+ 0.84	— 2. 2	2.5	8.27.54.53	6.56.48 A
	51.31.37 B	—0. 7.80	— 0.78	+ 2. 0	19.3	8.24.38. 3	74.57.28 B
μ	21. 5.48 A	—0. 0.50	— 0.05	— 5. 4	0.9	8.29.51.48	2.22.24 B
μ	20.46.29 A	—0. 0.50	— 0.05	+ 4. 3*	1.0	9. 0.12.43	2.41.42 B
	29.54.12 A	—0. 4.90	— 0.49	+ 1. 5	2.3	9. 1.13.41	6.26.37 A
	34.28.12½ A	—0. 7.20	— 0.72	+ 3. 8	3.8	9. 1.43.55	11. 0.45 A
	25.31.41 A	—0.11.50	— 1.15	— 2. 4	1.4	9. 2.58.21	2. 5.31 A
	38.34.24 B	+0.25.20	+ 2.52	— 2. 6	17.7	9.11.57. 3	61.44.40 B

Nr. stellæ.	Nomen stellæ & character.		Ascensio recta. S. G. M. S.	Variatio 10 Annorum in Ascensionem rectam. M. S. C.	Variatio annua in Ascensionem rectam. S. C.	Differentia a de la Caille S. D.	Aberratio maxima in Ascensionem rectam. S. D.
274	φ Sagittarii	3	9 7 39 49	9 24 00	56 40	— 3 2	22 4
275	28 Sagittarii	5	9 7 57 59	9 4 30	54 43		21 6
276	c Draconis	5	9 9 29 44	2 56 20	17 62		33 6
277	1. ν Sagittarii	4	9 9 55 9	9 6 00	54 60	+ 3 5*	21 8
278	σ Sagittarii	3	9 10 5 45	9 20 00	56 00	+ 5 9	22 3
279	2. ν Sagittarii	4	9 10 8 59	9 2 00	54 20	— 4 1*	21 8
280	β Lyræ	3	9 10 18 26	5 33 20	33 32	+ 5 2	23 8
281	1. ξ Sagittarii	6	9 10 46 8	8 57 50	53 75	+ 0 5*	21 4
282	2. ξ Sagittarii	5	9 10 51 5	8 57 00	53 70	— 3 8*	21 5
283	θ Serpentis dupl.	3	{9. 11. 4. 27. / 9. 11. 4. 45.}	7 28 40	44 84	{+ 0. 5. / — — —}	20 0
284	ζ Sagittarii	4	9 11 49 59	9 36 00	57 60	+ 8 0	23 0
285	o Draconis	4	9 11 54 46	2 14 00	13 40		38 7
286	o Sagittarii	3	9 12 34 26	9 1 00	54 10	+ 6 4	21 5
287	τ Sagittarii	3	9 12 59 9	9 26 00	56 60	+ 4 4	22 6
288	ζ Aquilæ	3	9 13 35 50	6 54 90	41 49	+ 2 9	20 4
289	π Sagittarii	4	9 13 52 14	8 57 50	53 75	+ 3 7	21 3
290	ψ Sagittarii	4	9 15 12 11	9 13 80	55 38		22 [illegible]
291	d Sagittarii	4	9 15 53 43	8 45 00	52 50	— 8 6*	21 0
292	1. χ Sagittarii	5	9 17 39 48	9 15 50	55 05		21 [illegible]
293	κ Cygni	4	9 17 53 20	3 25 50	20 55		33 [illegible]
294	δ Draconis	3	9 13 6 35	0 7 50	0 75	+ 4 2	
295	δ Aquilæ	3	9 18 20 56	7 33 00	45 30	+ 0 9	19 9
296	2 h Sagittarii	5	9 20 31 10	9 10 70	55 07		21 [illegible]
297	ι Cygni	4	9 20 54 49	3 48 60	22 86		[illegible]
298	θ Cygni	4	9 22 30 6	6 3 60	24 36		[illegible]
299	f. Sagittarii	5	9 23 5 6	8 50 00	53 00	— 3 6*	21 0
300	γ Aquilæ	3	9 23 42 47	7 9 30	42 93	+ 6 0	20 0
301	δ Cygni	3	9 24 22 9	4 41 90	28 19	— 3 1	28 1
302	α Aquilæ	1	9 24 46 0 7	7 15 40	43 54	+ 0 3	20 0
303	ω Sagittarii	5	9 25 16 31	9 13 60	55 36		22 1
304	b Sagittarii	4	9 25 32 52	9 17 20	55 72		22 2
305	β Aquilæ	3	9 25 52 53	7 23 30	44 33	+ 0 3	19 8
306	α Sagittarii	5	9 26 4 34	9 12 60	55 26		22 2
307	ε Draconis	5	9 27 13 20	—0 19 20	—1 92		56 6
308	θ Aquilæ	3	9 29 43 46	7 46 40	46 64	+ 5 1	19 6
309	ρ Draconis	5	10 0 23 52	0 50 60	5 06		50 5
310	1. α Capricorni	4	10 1 4 57	8 22 00	50 20	+ 5 5	20 1
311	2. α Capricorni	3	10 1 10 51	8 22 00	50 20	+ 4 7	20 1

Nomen Stellæ	Declinatio.	Variatio 10 Annorum in Declin.	Variatio annua in Declin.	Differentia a de la Caille.	aberratio maxima in Declin.	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S C.	S. D.	S.	S. G M. S.	G. M. S
	27.12.40 A	—0.26.80	— 2.68	— 3. 0	1. 7	9. 6.49.38	3. 55.22. A
	22.37. 4 A	—0.27.80	— 2.78		1. 4	9. 7.21. 2	0. 38.56 B
	55.18.12 B	+0.33.10	+ 3.31		19. 6	9. 26.35.55	77 53.35. B
ν	23. 0.56 A	—0.34.50	— 3,45	+ 5. 3*	1. 6	9. 9. 7.21	0. 8.26. B
	26,34. 8 A	—0.35.40	— 3.54	— 4. 9	1. 9	9. 9. 2. 7	3 24.55. A
ν	22.56.47½ A	—0.35.40	— 3.54	+ 0. 2*	1. 6	9. 9.20.21	0. 11.41. B
	33. 6.12. B	+0.35.90	+ 3.59	+ 9. 5	16. 6	9. 15.33.17	56. 1. 2 B
	20.56.45 A	—0.37.50	— 3.75	— 5. 2*	2. 0	9. 10. 3.24	2. 8.54 B
	21.23.52 A	—0.37.50	— 3.75	+ 4. 5*	2. 0	9. 10. 5.59	1. 41.32 B
	{3. 54. 31 / 13. 54. 37} B	+0.38.50	+ 3.85	{—13. 8. / — — —}	9. 2	{9. 12. 24. 32 / 9. 12. 24. 53}	{26. 54. 8. / 26. 54. 12.} B
	30.11.50 A	—0.41.10	— 4.11	— 1. 9	2. 9	9. 10.17 23	7. 8.58 A
	59. 6. 5 B	+0.41. 40	+ 4.14		19. 8	10.11.39.33	80.49.25. B
	22. 4. 9 A	—0.43.60	— 4.36	— 5. 0	1. 9	9. 11.38.26	0. 53.36. A
	27.59.43 A	—0.45.00	— 4.50	— 3. 5	2. 3	9. 11.29.22	5. 2.33. A
	13.31.28 B	+0,48.50	+ 4.85	— 6. 3	11. 9	9. 16.27.33	36.13.11. B
	21.22.53 A	—0.48.00	— 4.80	— 4. 6	2. 2	9. 12.54.11	1. 28. 7. B
	25.38.43 A	—0.52.60	— 5.26		2. 4	9. 13 41.33	2. 53.45 A
	19.21.26½ A	—0.53.00	— 5.30	+ 6. 4*	2. 7	9. 15. 0. 1	3. 17.15. B
χ	24.57. 7 A	—1. 0.90	— 6.09		2. 8	9. 15.58.59½	2. 27.29. A
	52.56. 1 B	+1. 1.60	+ 6.16		19. 4	10.11.37.30	73,48.57. B
	67.14.27 B	+1. 2.30	+ 6.23	+ 2. 9	20. 0	0. 14. 0. 5	82.52.51. B
	2. 39.16 B	+1. 3.10	+ 6.31	— 7. 3	8. 8	9. 20.16.30	24.50.26. B
h	25.23.29 A	—1.10.30	— 7.03		3. 0	9, 18.29.31	3. 13.50. A
	51.13.39 B	+1.11.60	+ 7.16		19. 2	10.14.40.38	71.27.44. B
	49.40.27 B	+1.16.80	+ 7.68		19. 1	10.15.20. 1	69.37.21. B
	20.19. 2 A	—1.18.60	— 7.86	+ 3. 9*	3. 4	9. 21.34.52	1. 26.16. B
	10. 2.44. B	+1.20.70	+ 8.07	— 0. 5	10. 8	9. 27.35.58	31.16. 8 B
	44.33. 21 B	+1.22.70	+ 8.27	— 3. 1	18. 0	10.12.56.24½	64 25.53 B
	8. 15. 5 B	+1.24.00	+ 8.40	— 4. 1	10. 3	9. 28.23.21	29.18 36. B
	26.54.49 A	—1.25.60	— 8.56		4. 0	9. 22.29. 1	5. 23.50. A
	27.46.59 A	—1.26.40	— 8.64		4 2	9. 22.34.23	6 17,44 A
	5. 49.32 B	+1.27.60	+ 8.76	— 5. 9	9. 7	9. 29. 5.17	26.42.59. B
	26.49.21 A	—1.28.10	— 8.81		4 0	9. 23.12.22	5. 25.54 A
	69.39.33 B	+1.31 70	+ 9.17		20. 0	0. 29.29. 2	79.28 30. B
	1. 30.57 A	—1.39.50	— 9.95	+ 2. 8	7. 6	10. 1.34. 4	18.45. 5. B
	67.11.30 B	+1.41.50	+10.15		20. 0	0. 17. 7.40	78. 8.59. B
α	13.13.54 A	—1.44.00	—10.40	— 7. 0	4 8	10. 0.25.17	7. 0.44. B
α	13.16.13 A	—1.44.00	—10.40	— 3. 5	4. 8	10. 0.30.27	6. 57.16. B

Nr. Stellæ.	Nomen Stellæ & Character.		Ascensio recta.				Variatio 10 Annorum in Asc. rectam.			Variatio annua in Asc. rectam.		differentia a de la Caille.		Aberratio maxima Ascensionis rectæ
			S.	G.	M.	S.	M.	S.	C.	S.	C.	S.	D.	S.
312	σ Capricorni	5	10 / 10	1 / 1	22 / 23	43 / 12	8	43	50	52	55	— 8 / —	9* / —	20
313	β Capricorni	3	10	1	52	34	8	23	00	50	30	+ 8	8	20
314	ρ Capricorni	5	10	3	47	15	8	37	80	51	78	+ 2	4*	20
315	υ Capricorni	5	10	6	35	19	8	37	00	51	70	— 6	5*	20
316	α Delphini	3	10	7	7	27	6	58	70	41	87	+ 7	2	20
317	α Cygni	1	10	8	18	51	5	7	50	30	75	—14	9	27
318	ε Aquarii	4	10	8	40	1	8	10	50	49	05	— 2	6*	19
319	ε Cygni	4	10	9	7	39	6	0	40	36	04	+15	3	23
320	μ Aquarii	4	10	9	55	23	8	8	70	48	87	— 2	1*	19
321	19 Capricorni	4	10	10	18	10	8	33	90	51	39	— 1	8*	20
322	η Capricorni	5	10	12	40	44	8	37	80	51	78	+ 0	1*	20
323	ϑ Capricorni	4	10	13	6	26	8	30	00	51	00	+ 0	4*	20
324	1 χ Capricorni	5	10	13	41	40	8	40	70	52	07	— 1	3*	20
325	ν Aquarii	5	10	14	7	30	8	3	00	48	30	— 8	9*	19
326	φ Capricorni	5	10	15	29	5	8	37	40	51	74	+ 1	5*	20
327	29 Capricorni	5	10	15	36	34	8	22	40	50	24			20
328	α Equulei	5	10	15	57	23	7	31	40	45	14	+11	1	19
329	ι Capricorni	5	10	17	12	50	8	25	60	50	56	+ 2	8*	20
330	α Cephei	3	10	18	12	28	3	35	50	21	55	+ 6	2	39
331	ζ Capricorni	4	10	18	13	42	8	39	70	51	97			20
332	b Capricorni	5	10	18	45	3	8	37	40	51	74	+ 1	5*	20
333	β Aquarii	3	10	19	43	40	7	57	00	47	70	— 1	4	19
334	ε Capricorni	4	10	20	54	11	8	29	00	50	90	+ 2	7*	20
335	ξ Aquarii	5.6	10	21	14	24	8	1	50	48	15	— 5	0*	19
336	ρ Cygni	4	10	21	14	34	5	38	30	33	83			26 5
337	β Cephei	3	10	21	22	13	2	6	70	12	67	+29	7	54
338	γ Capricorni	4	10	21	41	28	8	22	00	50	20	+ 6	7	20
339	κ Capricorni	5	10	22	18	23	8	26	20	50	62	— 0	2*	20 3
340	λ Capricorni	5	10	23	23	57	8	8	20	48	82	+ 2	6*	19 4
341	δ Capricorni	3	10	23	26	30	8	19	00	49	90	+ 5	8	19 8
342	2 π Cygni	5	10	24	29	11	5	31	40	33	14			28 3
343	μ Capricorni	5	10	25	2	46	8	12	00	49	20	— 5	1*	19 6
344	ο Aquarii	5	10	27	43	23½	7	47	50	46	75	— 5	8*	19 0
345	ι Aquarii	5	10	28	21	47	8	10	00	49	00	+ 1	9*	19 5
346	α Aquarii	3	10	28	21	47	7	45	00	46	50	+ 6	5	18 9
347	35 Aquarii	5	10	28	56	50	8	18	70	49	87			20 0
348	ϑ Aquarii	4	11	1	2	20	7	57	20	47	72	— 2	3*	19 0
349	ρ Aquarii	5	11	1	53	20	7	57	00	47	70	— 1	2*	18 9

Nomen stellæ	Declinatio.	Variatio 10 annorum in Declinationem.	Variatio annua in Declinationem.	Differentia a de la Caille	aberratio maxima in Declinationem	Longitudo.	Latitudo.
	G. M. S.	M. S. C.	S. C.	S. D.	S. D.	S. G. M. S.	G. M. S.
σ	19.50.54 A	—1.44.30	—10.43	— 0. 2*	4.2	{ 9. 29. 19. 53 — 29. 20. 0	10. 28. 48. B 10. 28. 43. B
β	15.31.15 A	—1.46 00	—10.60	+ 1. 0	4.5	10. 0.41.45	4.36.46 B
ζ	18.35.18 A	—1.51 50	—11.15	— 5. 7*	4 5	10. 1.49. 5	1.13.22 B
υ	18.57.57 A	—1.59.60	—11.96	+ 1. 6*	4.8	10. 4.18.46	0.14.49 B
α	15. 4.47 B	+2. 1.00	+12.10	— 5. 5	11.9	10.14. 2.34	33. 2.32 B
α	44.25.58 B	+2. 4.40	+12.44	— 1. 7	18.1	11. 2. 1.43	59.54.58½B
ι	10.21.28½A	—2. 5.30	—12 53	— 3. 1*	6.0	10. 8.22.31	8. 6.16 B
ι	33. 4.54 B	+2. 6 60	+12.66	— 6. 1	16.0	10.24.22.48	49.25.27 B
μ	9.52. 3½A	—2. 8.70	—12.87	— 2. 5*	6.0	10. 9.42.35	8.15.48 B
19	18.48.58 A	—2. 9.80	—12.98	— 4. 5*	5.1	10. 7.45.17	0.28.41 A
η	20.47.14 A	—2.15.90	—13.59	+ 0. 4*	5.5	10. 9.23.29	2.58 10 A
θ	18.10.13 A	—2.17.10	—13.71	— 1 2*	5.4	10.10.29.25	0,33.37 A
1.χ	22. 8.36 A	—2.18.50	—13.85	+ 5. 3*	5.9	10. 9.55.52	4.31.55 A
ν	12.19.43 A	—2.19.40	—13.94	— 3 1*	5.8	10.13. 2.36	4.47.11 B
π	21.37.59 A	—2.23.00	—14.30	+ 3. 1*	6.0	10.11 40.27½	4.30.30 A
29	16. 9.13 A	—2.23.30	—14.33		5.8	10.13.20 53	0.42.40 B
κ	4.16. 7 B	+2.24.20	+14.42	— 6. 4	8.8	10.19.46.33	20 .8.39½B
ι	17.50.31 A	—2.27.20	—14.72	+ 1. 6*	5.9	10.14.19.48½	1.20.53 A
κ	61.34.33 B	+2.29.50	+14.95	+ 1. 9	19.6	0. 9.29. 1	68.54.43 B
ζ	23.26. 9 A	—2.29.60	—14.96		6 5	10.13.34.51½	6.58.21 A
b	22.50.16 A	—2.30.80	—15.08	+ 4. 5*	6 5	10.14.13.24	6.32.46 A
β	6 .36.51 A	—2.33.00	—15.30	+ 2. 2	6.8	10.20. 2.54	8.37.54 B
ι	20.31.40 A	—2.36.00	—15 60	— 4. 5*	6.5	10.16.50.50	4.57.31 A
ξ	8. 55. 3 A	—2.36.40	—15.64	— 5. 5*	6.6	10.20.4[illegible]5	5.58.39 B
ρ	44.32.22 B	+2.36.40	+15.64		17.5	11.16.50.28	55.11.37 B
β	69.30.38 B	+2.36.60	+15.66	+ 1. 8	19.9	1. 2.15.53	71 7.57½B
γ	17.43.59 A	—2.37.00	—15.70	— 4. 1	6.3	10.18.25.43	2.32. 6 A
κ	19.56.49 A	—2.38.70	—15.87	— 3. 1*	6.6	10.18.17. 5	4.49.10 A
λ	12.27.39 A	—2.41.00	—16.10	— 1. 3*	6.5	10.21.3937½	1.56.42 B
δ	17.12.13 A	—2.41.00	—16.10	— 0. 3	6.6	10.20.10 55	2 33.40 A
2.κ	48.12.27 B	+2.43.20	+16 32		18.0	11.23 52.47	56.56.11 B
μ	14.40. 8 A	—2.44.40	—16.44	— 1. 2*	6.6	10.22.27.44	0.39.41 A
ο	3.18.13 A	—2.49.50	—16.96	+ 6. 0*	7.6	10.28.45.41	9.10.33 B
ι	15. 1.23 A	—2.50.70	—17.07	— 2. 3*	6.9	10.25.22. 7.	2. 3.47 A
α	1.28.33 A	—2.51.00	—17.10	+ 1. 7	7.8	11. 0. 0.27	10.40.25 B
35	19.41. 0 A	—2.51.80	—17.18		7.3	10.24.17.56	6.38. 1 B
θ	8.58. 5 A	—2.55.40	—17.54	+ 3. 0*	7.2	10.29.54.32	2.43.22 A
ρ	9. 1.10 A	—2.56.90	—17.69	+ 7. 7*	7.2	11. 0.40.41	2.22.50 B

Nr. stellæ	Nomen stellæ & character.		Ascensio recta.	Variatio 10 annorum in Ascensionem rectam	Variatio annua in Ascensio. rectam.	Differentia a de la Caille.	A…
			S. G M. S.	M. S. C.	S. C.	S. D.	S.
350	γ Aquarii	3	11 2 18 49 (degree value doubtful)	7 46 00	46 60	+ 0 7	18
351	π Aquarii	4	11 3 15 16	7 41 70	46 17		18
352	ζ Aquarii	4	11 4 7 1	7 43 70	46 37	— 6 3*	18
353	δ Aquarii	5	11 4 28 55	8 0 00	48 00	— 3 6*	19
354	7 Lacertæ	4	11 5 21 45	6 5 40	36 54		2…
355	υ Aquarii	5	11 5 22 58	8 15 50	49 55	— 0 5*	20
356	η Aquarii	4	11 5 45 18	7 43 67	46 37	— 4 9*	18
357	κ Aquarii	5	11 6 19 48	7 49 50	46 95	+ 0 5*	18
358	1 τ. Aquarii	5	11 8 44 17	8 0 30	48 03	+ 1 6*	19
359	2 τ. Aquarii	4	11 9 12 59	8 0 70	48 07	+ 0 9*	19
360	λ Aquarii	4	11 10 1 18	7 52 50	47 25	— 2 8	18
361	i Cephei	4	11 10 17 54	5 13 20	31 32		13
362	δ Aquarii	3	11 10 28 24	8 2 50	48 25	+ 6 0	19
363	Fomalhaut	1	11 11 5 5	8 20 60	50 06	+ 1 8	21
364	β Piscium	4	11 12 55 2	7 39 20	45 92	— 1 4*	18
365	β Pegasi	2	11 13 2 40	7 12 50	43 25	+ 8 0	20
366	1. h Aquarii	6	11 13 9 31	7 51 99 (?)	47 10	— 6 5*	18
367	2. h Aquarii	7	11 13 12 7	7 51 00	47 10		18
368	α Pegasi	2	11 13 12 23	7 27 50	44 75	+ 0 8	19
369	3. h. Aquarii	7	11 13 20 32	7 50 80	47 08		18
370	Φ Aquarii	4	11 15 28 18	7 48 30	46 83	+ 8 4	18 6
371	1. ψ. Aquarii	5	11 15 49 36	7 50 80	47 08	0 0*	18 7
372	χ Aquarii	6	11 16 6 3	7 49 50	46 95	+ 0 7*	18 7
373	2. ψ. Aquarii	5	11 16 21 18	7 50 70	47 07	+ 1 2*	18 8
374	3. ψ Aquarii	5	11 16 36 58	7 50 80	47 08	— 2 6*	18 8
375	96 Aquarii	5	11 16 44 13	7 46 90	46 69		18…
376	d Cassiopeæ	5	11 18 34 10	6 30 20	39 02		37…
377	1. κ Piscium	5	11 18 39 34	7 41 80	46 18	+ 5 2*	18 4
378	1. λ Andromedæ	4	11 21 28 16	7 11 90	43 19		26 6
379	λ Piscium	5	11 22 27 10	7 41 60	46 16	+ 4 7*	18 4
380	19 Piscium	5	11 23 32 9	7 40 90	46 09	+ 2 9*	18 4
381	27 Piscium	5	11 26 35 49	7 40 00	46 00	— 1 1*	
382	ω Piscium	4	11 26 45 4	7 43 00	46 30	+ 1 9*	18 4
383	29 Piscium	5	11 27 22 56	7 42 50	46 25	+ 1 2*	18 4
384	30 Piscium	5	11 27 24 47	7 43 00	46 30	+ 1 8*	18 4
385	33 Piscium	5	11 28 15 47	7 42 50	46 25	— 2 0*	18 5
386	α Andromedæ	2	11 29 9 25	7 40 00	46 00	+ 1 2	20 7
387	β Cassiopeæ	3	11 29 7 40	7 37 00	45 70	+ 8 2	34 6

Declinatio	Variatio 10 Annorum in Declinationem.	Variatio annua in Declinationem.	Differentia à de la Caille.	Aberratio maxima in Declinationem.	Longitudo.	Latitudo.
G. M. S.	M. S. C	S. C.	S. D.	S. C.	S. G. M. S.	G. M. S.
2.35.18 A	—2.57.60	—17.76	+ 4. 5	7. 7	11. 3. 21.37	8.14.48 B
0.11 5 B	+2.59.10	+17.91		8. 0	11. 5.15.10	10.28.54 B
1 14.24 A	—3. 0.40	—18 04	+ 4. 9*	7. 9	11. 5. 33. 4	8.51.25 B
11.53.52 A	—3. 0.90	—18.09	—21. 9*	7. 2	11. 2. 2.18	1.12.56 A
49. 3.18 B	+3. 2.30	+18.23		17. 7	0. 4.49.14	53.17.16 B
21.55.42 A	—3. 2.30	—18.23	— 15. 4*	8. 2	10.29.10.39	10.52.27 A
1.20.48 A	—3. 5.80	—18.58	+ 2. 1*	7 .8	11. 7. 3.12½	8. 9.36 B
5 27.30 A	—3. 3.70	—18.37	— 6. 6*	7. 5	11. 6. 4.35	4. 7.26 B
15.18.52 A	—3. 6.80	—18.68	+ 9. 5*	7. 7	11. 4.38.28	5.54 36½A
14.51. 9 A	—3. 7.50	—18.75	— 4. 3*	7. 7	11. 5.14.43	5.39.15 A
8.51. 0 A	—3. 8.40	—18.84	+ 2. 0	7. 6	11. 8.13.32½	0.22.56 A
64.56.31 B	+3. 8.80	+18.88		19. 2	0.29.57.24	62.35.53½B
17. 5.27 A	—3. 9.00	—18.90	+ 0. 8	8. 0	11. 5.31.25	8.10.58 A
30.53.14 A	—3. 9.70	—18.97	+ 2. 0	10. 3	11. 0.28.59	21. 6.19 A
2.31.58 B	+3.11.70	+19.17	— 3. 5*	8. 9	11.15.14.25½	9. 3.24 B
26.47. 8 B	+3.11.80	+19.18	+ 0. 5	12. 9	11.26. 1.34	31. 8. 6 B
8.59. 2 A	—3.12.00	—19.20	—10. 0*	7. 6	11.11. 2.42	1.40.37½A
9. 2.40 A	—3.12.00	—19.20		7. 5	11.11. 3.41	1.44.57½A
13.55. 6 B	+3.12.00	+19 20	— 5. 1	10. 2	11.20. 8.38	19.24.37½ B
9.13.36 A	—3.12.00	—19.20		7. 6	11.11. 7.11½	1.58.14 A
7.20.18 A	—3.14.10	—19.41	+ 2. 6	7. 7	11.13.47.29	1. 2. 7½A
10.23.27 A	—3.14.40	—19.44	— 3. 1*	7. 9	11.12.56. 5½	3.59.11 A
9. 1.51 A	—3.14.70	—19.47	+ 0. 4*	7. 9	11.13.42.43	2.50.14 A
10.29.18 A	—3 14.90	—19.49	— 1. 3*	7. 9	11.13.22.38	4.16.40 A
10.55. 7 A	—3.15.10	—19.51	— 0. 1*	8. 0	11.13.26.48	4 46.26 A
6.25.56 A	—3.15.20	—19.52		7. 8	11.15.18.20½	0.40.22 A
60.58. 8 B	+3.16.60	+19.66		18. 6	0.28.39.45	57.10.27 B
0. 3.18 A	—3.16.60	—19.66	+ 2. 6*	8. 0	11.19.33.16½	4.26.28 B
45. 9.37 B	+3.18.40	+19.84		15. 9	0.14.58.19	43.47.39 B
0.27.40 B	+3.18.80	+19.88	+ 3. 3*	8. 0	11.23.15.12½	3.25.20 B
2. 9.22 B	+3 19.30	+19.93	— 5. 2*	8. 1	11.24.55.24	4.32.57 B
— — — —	—3.20.00	—20.00	— — —	— —	— — — —	— — — —
5.33. 7 B	+3.20.20	+20.02	— 8. 4*	8. 4	11.29.13.54	6.22.13 B
4.21.48 A	—3.20.30	—20.03	+ 6. 5*	8. 1	11.25.51.41	2.57.38 A
7.20.53 A	—3.20.30	—20.03	— 1. 4*	8. 2	11.24.41.42	5.42.35 A
7. 3. 0 A	—3 20.50	—20.05	— 2. 3*	8. 2	11.25.35.30	5.46.25 A
27.45.41 B	+3.20.50	+20.05	—14. 9	11. 7	0.19.57.59	25.40.52 B
57.49.35 B	+3.20 50	+20.05	+ 2. 1	17. 5	1 .1.45.52	51.13.36 B

Supplementum earum Stellarum, quæ in Catalogo Bradlejano non habent e Catalogo D. de la Caillii ad Annum 1750

Nomina Stellarum e Catalogo D. de la Caille.			Ascensio recta.	Variatio 10 Annorum.	Declinatio pro Anno 1750.	Variatio 10 Annorum.	Aberratio maxima in Asc. rectam.
			S. G. M. S.	M. S.	G. M. S.	M. S.	S.
Polaris	α	2	0.10.40.56.0	25 8 8	87.58. 2.4B	+ 3.17.0	51 9
Triang.	α	4	0.24.43 33.1	8 27 0	28.21. 1.4B	+ 3. 2.2	21 2
Triang.	β	4	0.28.41.19.0	8 46 3	33.47.31.2B	+ 2.55.9	22 7
Triang.	γ	4	1. 0.38. 5.9	8 47 3	32.40.39.0B	+ 2.52.5	22 4
Eridani	ε	3	1.20.17.24.1	7 13 7	10.19 10.2A	— 2. 8.1	19 7
Plej. Atlas	f	5	1.23.35. 7.9	8 51 2	33.16. 2.6B	+ 1.59.0	21 2
Persei	ζ	3	1.24 37. 8.2	9 20 5	31. 7. 5.4B	+ 1.56.1	22 7
Persei	ε	3	1.25.17 22.8	9 56. 6	39 15.43.6B	+ 1.54.2	25 1
Eridani	1	4.5	1.25.46,10.7	6 23 2	25.22. 8.0A	— 1.52.8	21 5
Eridani	ο	4	1.29.55.19.6	7 19 0	7.30.24.3A	— 1.40.5	19 7
Eridani	ν	3	2. 6.27.40.7	5 51 0	31. 5.22.9A	— 1.20.1	23 1
Eridani	53	3	2. 6.41.14.7	6 53 1	14.48.40.7A	— 1.19.4	20 4
Eridani	54	3	2. 7.23. 9.7	6 33 8	20.10.14.5A	— 1.17.1	21 0
Orion	η	3	2.17.58.53 4	7 32 6	2.38.56.0A	— 0.41.7	19 9
Orion	ι	3	2.20.48 18.5	7 20 7	6. 5.41.8A	— 0.32.1	20 1
Orion	ζ	2	2.22. 2 30.2	7 34 5	2. 5.47 8A	— 0 27.8	20 0
Columb.	α	2	2 22.39. 3 9	5 26 5	34.13.21.2A	— 0.25.7	24 1
Orion	κ	3	2.23.58.45.9	7 7 4	9.46.39.5A	— 0.21.0	20 3
Leporis	δ	3.4	2.25. 8.44.8	6 25 4	20.55.12.9A	— 0.17.0	21 4
Aurigæ	β	3	2.25.18 3.3	11 0 9	44.53.18.2B	+ 0.16.4	28 4
Columbæ	β	3	2.25.32.29.4	5 17 2	35 52.39 3A	— 0.15.6	24 7
Can. major	ζ	3	3. 2.40.50.5	5 46 3	29.58. 8 9A	+ 0. 9.4	23 1
Can. major	β	2	3. 2.55.23.7	6 37 3	17.51. 8.8A	+ 0.12.2	21 0
Can. major	ε	3	3.12.12. 4.0	5 54 7	28 38.56.8A	+ 0.42.4	22 6
Can major	δ	2	3 14.33.26.0	6 7 1	26. 0.52.6A	+ 0.50.4	22 2
Can. minor	β	3	3.18.23.49.0	8 11 1	8.46.23.6B	— 1. 3.3	20 1
Argonav.	ξ	3.4	3.24.41.43.1	6 19 7	24.15. 0.5A	+ 1.23.8	21 6
Argonav.	ε	3.4	3.29.13.22.9	6 25 3	23.36. 3.7A	+ 1.37.9	21 5
Hydræ	ζ	3.4	4.10.32.25.0	8 0 2	6.53.14 0B	— 2.10.3	19 4
Ursæ maj.	κ	4	4.11.36.31 0	10 29 0	48. 7 26.7B	— 2.13.1	28 8
Leonis	μ	3	4.24.37.24 0	8 41 4	27.10.14.9B	— 2.43.5	21 3
Crateris	α	3	5.11.54. 9.5	7 22 8	16.58.26.3A	+ 3.10.6	19 4

Supplementum earum Stellarum, quæ in Catalogo Bradlejano non habentur e Catalogo D. de la Caille ad Annum 1750.

Nomina Stellarum e Catalogo D. de la Caille.	Ascensio recta.	Variatio 10 annorum.	Declinatio Pro Anno 1750.	Variatio 10 annorum.	Aberratio maxima in ascen. rectam.	Aberratio maxima in Declinationem.
	S. G. M. S. D.	M. S.	G. M. S.	M. S.	S.	S.
Corvi α 4	5.28.53.32.4	7 40 2	23.20. 2.6A	+3 20 5	20 0	10 8
Corvi ε 4	5.29.19.43.9	7 40 9	21.13.41.6A	+3 20 5	19 8	10 3
Corvi δ 4	6. 4.14.30.7	7 45 8	15. 7.15.6A	+3 19 9	19 0	9 0
Corvi β 3	6. 5.19.33.7	7 49 5	22. 0.36.7A	+3 19 6	19 8	9 9
Ursæ major. ε 2	6.10.44. 9.8	6 43 7	57.19.20.9B	—3 17 1	34 0	18 0
Hydræ γ 3	6.16.20.49.5	8 5 0	21.50.40.5A	+3 12 4	19 8	8 9
Centauri ι 3	6.16.39.30.5	8 22 6	35.23. 5.2A	+3 12 1	22 5	7 6
Virginis ζ 3	6.20.29.32.3	7 41 0	0.41.29.5B	—3 7 8	18 5	8 5
Bootis η 3	6.25.41.42.2	7 10 7	19.39.46.6B	—3 0 7	19 8	11 5
Centauri ϑ 3	6.28. 0.59.3	8 48 1	35. 7.33.2A	+2 57 0	22 8	10 3
Bootis γ 3	7. 5.29.59.2	6 6 1	39.24.50.5B	—2 43 2	24 4	16 2
Bootis ζ 3	7. 7.18.19.1	7 9 6	14.48.57.3B	—2 39 5	19 6	9 7
Bootis ε 3	7. 8.31. 4.1	6 35 0	28. 8.31.7B	—2 36 9	21 6	12 3
Bootis β 3	7.13. 8. 2.1	5 41 0	41.23.18.7B	—2 26 4	25 2	17 2
Bootis δ 3	7.16.21.25.5	6 3 0	34.15.43.7B	—2 18 4	23 1	15 9
Draconis ι 3	7.19.51. 3.9	3 17 9	59.51. 0.7B	—2 9 3	38 6	19 5
Ursæ min. γ 3	7.20.19.54.7	— 5 5	72.43.27.9B	—2 8 0	65 0	20 0
Serpentis δ 3	7.20.43.11.5	7 10 5	11.23.32.3B	—2 6 9	19 8	10 9
Serpentis β 3	7.23.39.51.8	6 54 8	16.13.20.0B	—1 58 8	20 3	12 1
Serpentis μ 4	7.24. 9. 1.3	7 49 3	2.38.39.1A	+1 57 4	19 4	7 5
Serpentis ε 4	7.24.25.31.3	7 26 8	5.15. 0.6B	—1 56 2	19 6	9 1
Scorpii ρ 4	7.25.22.44.6	9 11 3	28.27.32.7A	+1 53 9	22 2	5 2
Serp. γ 3	7.26.13.51.7	6 52 4	16.29.43.5B	—1 51 4	19 6	12 1
Draconis ϑ 4	7.29.18.39.0	2 52 1	59.14.23.8B	—1 42 2	33 4	19 6
Ophiuchi ε 3	8. 1.16.48.4	7 54 3	4. 3.36.8A	+1 36 3	19 6	6 9
Herculis γ 3	8. 2.43.33.0	6 37 7	19.45.32.2B	—1 31 9	20 9	13 4
Herculis β 3	8. 4.52.23.6	6 28 3	22. 3.10.1B	—1 25 2	21 2	14 0
Draconis η 3	8. 5. 9.48.6	1 58 3	62. 5. 6.5B	—1 24 2	42 2	19 9
Ophiuchi ζ 3	8. 5.51.20.0	8 14 2	10. 2.14.1A	+1 22 0	20 0	5 2
Herculis ζ 3	8. 7.58. 6.4	5 45 7	32. 4.20.2B	—1 15 2	23 4	16 2
Scorpii ε 3	8. 8.30.14.3	9 46 8	33.48.39.2A	+1 13 5	23 8	5 0
Herculis η 3	8. 8.35. 3.1	5 8 4	39.24.49.1B	—1 13 2	25 5	17 7

Supplementum earum Stellarum, quæ in Catalogo Bradlejano non habentu
e Catalogo D. de la Caillii ad Annum 1750.

Nomina Stellarum e Catalogo D. de la Caille.	Ascensio recta ad Annum 1750.	Variatio 10 Annorum.	Declinatio ad Annum 1750.	Variatio 10 annorum.	Aberratio maxima in Asc. rectam	Aberratio maxima in Declinationem
	S. G. M. S.	M. S.	G. M. S.	M. S.	S.	S.
Herculis ε 3	8.12.40.55.7	5 45 3	31 18 45.4B	—0 59 7	23 1	16 1
Ophiuchi η 2	8.14. 0.56.0	8 34 9	15.23.25.9A	+0 55 7	20 6	3 5
Herculis δ 3	8.16.11.33.7	6 10 3	25. 9. 8.2B	—0 47 0	21 9	14 8
Ophiuchi β 3	8.22.46.57.5	7 25 4	4.41.42.3B	—0 25 2	20 0	9 3
Oph. Aust. γ 3	8.23.50.37.3	7 32 0	2.49.30.2B	—0 21 5	20 0	8 9
Herculis μ 4	8.24.10. 9.8	5 26 2	27.53. 7.4B	—0 20 4	22 6	15 6
Serpentis ζ 4	8.26.49.21.9	7 54 6	3.38.53.7A	+0 11 1	20 0	6 8
Herculis ϑ 3	8.26.55.21.9	5 9 3	37.17.57.4B	—0 10 8	25 0	17 4
Sagittæ γ 4	8.27.15.56.0	9 35 4	29.33.42.7A	+0 9 6	23 0	2 3
Serpentis η 3	9. 2. 5.42.5	7 52 1	2.56.28.5A	—0 7 3	20 0	7 0
Lyræ δ 3	9.11.26.37.9	5 15 8	36.35.51.5B	+0 39 8	24 8	17 2
Aquilæ ε 4	9.12. 4.19.1	6 50 2	14.44.58.0B	+0 41 9	20 6	12 4
Lyræ γ 3	9.12.23.55.4	5 37 7	32.21.52.5B	+0 43 1	23 6	16 5
Antinoi λ 4	9.13.14.39.5	7 59 7	5.14. 4.6B	—0 46 0	20 0	6 4
Cygni β 3	9.20. 9.35.6	6 4 0	27.27. 6.8B	+1 9 1	22 3	15 2
Antinoi ι 4	9.20.56.41.6	7 47 8	1.49. 8.8A	—1 11 7	19 8	7 4
Sagittæ α 4	9.22.14. 5.8	6 43 4	17.27.29.8B	+1 15 9	20 7	12 4
Antinoi η 4	9.24.55.55.6	7 40 6	0.23. 8.2B	+1 24 6	19 7	8 1
Cygni γ 3	10. 3.18.51.7	5 23 8	39.28.15.9B	+1 50 1	25 3	17 3
Delphini ε 4	10. 5.18.59.9	7 11 6	10.28.20.8B	+1 55 9	19 7	10 6
Delphini ζ 4	10. 5.54.16.1	7 1 8	13.49.53.5B	+1 57 6	20 0	11 7
Delphini β 3	10. 6.27.32.3	7 2 3	13.44.33.2B	+1 59 2	20 0	11 7
Delphini δ 4	10. 7.56.43.1	7 1 8	14.11.37.6B	+2 3 3	20 1	11 7
Delphini γ 4	10. 8.46. 1.0	6 50 2	15.14.23.4B	+2 5 6	20 0	11 9
Cygni ζ 4	10.15.34.28.1	6 23 3	29.12.53.5B	+2 23 2	22 0	14 8
Pegasi e 4	10.17.37.33.7	6 31 9	18.44.55.2B	+2 28 1	20 2	12 5
Pegasi ε 3	10.22.58.34.2	7 23 2	8.44.31.3B	+2 40 1	19 2	10 3
Cygni μ 4	10.23.14.45.9	6 39 0	27.37.28.1B	+2 40 7	21 4	14 2
Pegasi ζ 3	11. 7.14.56.5	7 28 8	9.32. 8.5B	+3 4 9	18 9	9 4
Pegasi η 3	11. 7.49.40.[illegible]	7 0 0	28.55.17.5B	+3 5 7	21 2	13 8
Androm. ο 4	11.12.36.56.5	6 49 8	40.59.15.6B	+3 11 4	24 5	15 9
Cephei γ 4	11.22.19.23.5	5 52 4	76.14.11.0B	+3 18 7	77 2	19 6

TABULA I.

Acceleratio fixarum culminantium in tempore solari medio,

Itemque Retardatio culminationum Solis motu medio incedentis in Tempore solari fixarum supputata.

Culminationes	Acceleratio fixarum culminantium in tempore solari medio. H.	M.	S.	T.	H. / M.	Pars proportionalis Accelerationis Fixarum in tempore medio pro Horis, & Minutis. M. / S.	S. / T.	T. / Q.	Q. / C.	Culminat. ☉	Retardatio Culminationum solis motu medio incedentis in Tempore fixarum. H.	M.	S.	T.
1	0.	3.	55.	54.						1	0.	3.	56.	33.
2	0.	7.	51.	48.	1	0.	9.	49.	45	2	0.	7.	53.	6.
3	0.	11.	47.	42	2	0.	19.	39.	30.	3	0.	11.	49.	40.
4	0.	15.	43.	36.	3	0.	29.	29.	15.	4	0.	15.	46.	13.
5	0.	19.	39.	30.	4	0.	39.	19.	0.	5	0.	19.	42.	47.
6	0.	23.	35.	24.	5	0.	49	8.	45.	6	0.	23.	39.	20.
7	0.	27.	31.	18	6	0.	58.	58.	30.	7	0.	27.	35.	54.
8	0.	31.	27.	12.	7	1.	8.	48.	15	8	0.	31.	32.	27.
9	0.	35.	23.	6.	8	1.	18.	38.	0.	9	0.	35.	29.	1.
10	0.	39.	19.	0.	9	1.	28.	27.	45.	10	0.	39.	25.	34.
11	0	43.	14.	54.	10	1.	38.	17.	30.	11	0.	43.	22.	8.
12	0.	47.	10.	48	11	1.	48.	7.	15.	12	0.	47.	18.	41.
13	0.	51.	6.	42.	12	1.	57.	57.	0.	13	0.	51.	15.	15.
14	0.	55.	2.	36.	13	2.	7.	46	45.	14	0.	55.	11.	49.
15	0.	58.	58.	30.	14	2.	17.	36.	30.	15	0.	59.	8.	22.
16	1.	2.	54.	24.	15	2.	27.	26.	15.	16	1.	3.	4.	56.
17	1.	6.	50.	18.	16	2.	37	16.	0.	17	1.	7.	1.	29.
18	1.	10.	46.	12.	17	2.	47.	5	45.	18	1.	10.	58.	3.
19	1.	14.	42.	6.	18	2.	56.	55.	30.	19	1.	14.	54.	36.
20	1.	18.	38.	0.	19	3.	6.	45.	15.	20	1.	18.	51.	10.
21	1.	22.	33.	54.	20	3.	16.	35.	0.	21	1.	22.	47.	43.
22	1.	26.	29.	48.	21	3.	26.	24.	45.	22	1.	26.	44.	17.
23	1.	30.	25.	42	22	3.	36.	14.	30.	23	1.	30.	40.	50.
24	1.	34.	21.	36.	23	3.	46.	4.	15.	24	1.	34.	37.	24.
25	1.	38	17.	30	24	3.	55.	54.	0.	25	1.	38.	33.	57.
26	1.	42.	13.	24.	25	4.	5.	43.	45	26	1.	42.	30.	31.
27	1.	46.	9	18.	26	4.	15.	33.	30.	27	1.	46.	27.	4.
28	1.	50.	5.	12.	27	4.	25.	23.	15	28	1.	50.	23.	38.
29	1.	54	1.	6.	28	4.	35.	13.	0	29	1.	54.	20.	11.
30	1.	57.	57.	0.	29	4.	45.	52.	45.	30	1.	58.	16.	45.
60	3.	55.	54.	1.	30	4.	54.	52.	30.	60	3.	56.	33.	30.
90	5.	53.	51.	[illegible]						90	5.	54.	50.	15.

Tabula II.

Millesimæ anni partes, per quas præcessio multiplicanda.

Dies	Januarius.	Februarius.	Martius.	Aprilis.
1	0 003	0 087	0 164	0 250
2	0 005	0 090	0 167	0 253
3	0 008	0 093	0 170	0 255
4	0 010	0 095	0 172	0 258
5	0 013	0 098	0 175	0 261
6	0 016	0 100	0 178	0 263
7	0 018	0 103	0 181	0 266
8	0 021	0 106	0 184	0 269
9	0 024	0 108	0 186	0 271
10	0 027	0 111	0 189	0 274
11	0 029	0 114	0 191	0 277
12	0 032	0 116	0 194	0 280
13	0 035	0 119	0 197	0 282
14	0 037	0 122	0 199	0 285
15	0 040	0 124	0 202	0 288
16	0 043	0 127	0 205	0 290
17	0 047	0 130	0 207	0 293
18	0 049	0 132	0 210	0 296
19	0 052	0 135	0 213	0 299
20	0 055	0 138	0 215	0 302
21	0 058	0 140	0 218	0 305
22	0 060	0 143	0 221	0 308
23	0 063	0 146	0 224	0 310
24	0 066	0 149	0 226	0 313
25	0 069	0 152	0 229	0 316
26	0 072	0 155	0 232	0 318
27	0 074	0 158	0 235	0 321
28	0 077	0 161	0 238	0 324
29	0 079		0 240	0 327
30	0 082		0 244	0 329
31	0 085		0 247	

Tabula II.

Millesimæ anni partes, per quas præcessio multiplicanda.

Dies	Majus.		Junius.		Julius.		Augustus	
1	0	332	0	417	0	499	0	583
2	0	335	0	419	0	502	0	586
3	0	337	0	422	0	504	0	588
4	0	340	0	425	0	507	0	591
5	0	343	0	427	0	510	0	594
6	0	345	0	430	0	512	0	596
7	0	348	0	433	0	515	0	599
8	0	351	0	435	0	518	0	602
9	0	353	0	438	0	520	0	605
10	0	356	0	441	0	523	0	608
11	0	359	0	443	0	526	0	610
12	0	361	0	447	0	528	0	613
13	0	364	0	449	0	531	0	616
14	0	367	0	452	0	534	0	618
15	0	370	0	455	0	536	0	621
16	0	372	0	457	0	539	0	624
17	0	375	0	460	0	542	0	626
18	0	378	0	463	0	545	0	629
19	0	381	0	466	0	548	0	631
20	0	384	0	469	0	551	0	634
21	0	387	0	471	0	554	0	637
22	0	390	0	474	0	556	0	639
23	0	393	0	477	0	559	0	642
24	0	395	0	480	0	562	0	645
25	0	398	0	482	0	564	0	648
26	0	401	0	485	0	567	0	651
27	0	403	0	488	0	570	0	654
28	0	406	0	490	0	572	0	657
29	0	409	0	493	0	575	0	660
30	0	411	0	496	0	578	0	662
31	0	414			0	580	0	665

TABULA II.

Millesimæ anni partes, per quas præcessio multiplicanda.

Dies	September.	October.	November.	December.
1	0 668	0 749	0 835	0 917
2	0 670	0 752	0 837	0 920
3	0 673	0 755	0 840	0 922
4	0 676	0 757	0 842	0 925
5	0 678	0 760	0 845	0 928
6	0 681	0 763	0 848	0 931
7	0 684	0 765	0 850	0 934
8	0 686	0 768	0 853	0 936
9	0 689	0 771	0 856	0 939
10	0 692	0 774	0 858	0 942
11	0 695	0 776	0 861	0 945
12	0 697	0 779	0 864	0 948
13	0 700	0 782	0 867	0 950
14	0 703	0 784	0 869	0 952
15	0 705	0 787	0 872	0 955
16	0 708	0 790	0 875	0 958
17	0 711	0 792	0 878	0 960
18	0 713	0 795	0 881	0 963
19	0 716	0 798	0 884	0 966
20	0 719	0 801	0 887	0 968
21	0 722	0 804	0 889	0 971
22	0 724	0 807	0 892	0 974
23	0 727	0 809	0 895	0 977
24	0 730	0 812	0 898	0 980
25	0 733	0 815	0 901	0 983
26	0 736	0 818	0 904	0 986
27	0 739	0 821	0 906	0 988
28	0 741	0 824	0 909	0 991
29	0 744	0 826	0 912	0 994
30	0 747	0 829	0 914	0 997
31		0 832		1 000

TABULA III.

Ad inveniendam exacte horam conjunctionis lunæ cum ſole aut cum fixa ope longitudinum calculatarum ad duodenas quasque horas.

	Differentiæ ſecundæ de 12 in 12 horas.										
	0′	1′	2′	3′	4′	5′	6′	7′	8′	9′	
H. M.	S.	S.	S.	S.	S.	S.	S.	S.	S.	S.	
0 0	0	0	0	0	0	0	0	0	0	0	12 0
0 30	0	2	4	6	8	10	12	14	16	18	11 30
1 0	0	4	8	12	16	20	24	28	32	36	11 0
1 30	0	6	12	17	23	29	35	40	46	52	10 30
2 0	0	8	15	23	30	38	46	53	61	68	10 0
2 30	0	9	18	26	35	45	53	62	71	80	9 30
3 0	0	10	20	31	41	51	61	71	81	92	9 0
3 30	0	11	22	33	45	56	66	77	89	100	8 30
4 0	0	12	24	36	48	60	72	84	96	108	8 0
4 30	0	13	25	38	50	63	76	88	100	113	7 30
5 0	0	13	26	39	52	66	79	92	105	118	7 0
5 30	0	14	27	41	54	68	82	94	108	122	6 30
6 0	0	14	28	42	55	69	83	96	110	124	6 0
											H M.
	0′	1′	2′	3′	4′	5′	6′	7′	8′	9′	
	Differentiæ ſecundæ de 12 in 12 horas.										

Adde hanc quantitatem horæ conjunctionis inventæ ope partium proportionalium, cum motus ſemidiurnus, ſeu differentiæ primæ creſcunt.

Subtrahe ab hora inventa ope partium proportionalium, cum motus ſemidiurnus decreſcit.

Tabula IV.

Correctio motui uniformi lunæ per partes proportionales inven[to] applicanda.

Hor. poſt. mer. vel. med. n.	Differentiæ ſecundæ de 12 in 12 horas.					
	1′	2′	3′	4′	5′	
H. M.	S.	S.	S.	S.	S.	H. M.
0 0	0	0	0	0	0	12 0
0 20	1	2	2	3	4	11 40
0 40	2	3	5	6	8	11 20
1 0	2	5	7	9	11	11 0
1 20	3	6	9	12	14	10 40
1 40	4	7	11	14	18	10 20
2 0	4	8	13	17	21	10 0
2 20	5	9	14	19	23	9 40
2 40	5	10	15	20	25	9 20
3 0	6	11	17	22	28	9 0
3 20	6	12	18	24	30	8 40
3 40	6	13	19	25	31	8 20
4 0	7	13	20	26	33	8 0
4 20	7	14	20	27	34	7 40
4 40	7	14	21	28	35	7 20
5 0	7	15	22	29	36	7 0
6 0	8	15	23	30	38	6 0
	1′	2′	3′	4′	5′	

Adde motui uniformi per partes proportionales invento, cu[m] motus ſemidiurnus decreſcit.

Subtrahe a motu uniformi, cum motus ſemidiurnus creſcit.

Tabula IV.

Correctio motui uniformi lunæ per partes proportionales invento applicanda.

Hor. post mer. vel med. n.		Differentiæ fecundæ de 12 in 12 horas.						
		5′	6′	7′	8′	9′		
H.	M.	S.	S.	S.	S.	S.	H.	M.
0	0	0	0	0	0	0	12	0
0	20	4	5	6	6	7	11	40
0	40	8	10	11	13	14	11	20
1	0	11	14	16	18	21	11	0
1	20	14	17	20	23	26	10	40
1	40	18	21	25	29	32	10	20
2	0	21	25	29	34	38	10	0
2	20	23	28	33	38	42	9	40
2	40	25	31	36	41	46	9	20
3	0	28	34	39	44	50	9	0
3	20	30	35	41	47	54	8	40
3	40	31	38	44	50	57	8	20
4	0	33	40	46	53	60	8	0
4	20	34	41	48	55	62	7	40
4	40	35	43	50	57	64	7	20
5	0	36	44	52	58	66	7	0
6	0	38	45	53	60	68	6	0
		5′	6′	7′	8′	9′		

Adde motui uniformi per partes proportionales invento, cum motus semidiurnus decrescit.

Subtrahe a motu uniformi, cum motus semidiurnus crescit.

TABULA V.

Refractiones Astronomicæ Parisiis, & ad caput bonæ spei.

Altitudo apparens supr horizont	Ad caput bonæ spei. Refractio.	Parisiis. Refractio.	Altitudo apparens supr. horizont	Ad caput bonæ spei. Refractio.	Parisiis. Refractio.	Altitudo apparens supr horizont	Ad caput bonæ spei. Refractio.	Parisiis. Refractio.
G.	M. S.	M. S.	G.	M. S.	M. S.	G.	S.	S.
6	8.28.0	8.41.0	34	1.35.6	1.38 0	62	34.7.	35.5.
7	7.28.0	7.39.0	35	1.32.2	1.34.6	63	33.2.	34.0.
8	6.37.0	6.47.0	36	1.28.9	1.31.2	64	31.8.	32.5.
9	5.54.0	6. 3.0	37	1.25.8	[illegible] 28.0	65	30.4.	31 1
10	5.19.0	5.27.0	38	1.22.8	1.24.9	66	29 0.	29.7.
11	4.51.0	4.57.0	39	1 19.9	1.21.9	67	27.7.	28.3.
12	4.26.0	4.32.0	40	1.17.1	1.19.0	68	26.4.	26 9.
13	4. 6.0	4.12.0	41	1.14.5	1.16.3	69	25.1.	25.6.
14	3.50.0	3.56.0	42	1.12.0	1.13.7	70	23.8.	24.2.
15	3.37.0	3.42.0	43	1. 9.6	1.11.2	71	22.5.	22.9.
16	3.26.0	3.31.0	44	1. 7.2	1. 8.8	72	21.2.	21.6.
17	3.16.0	3.21.0	45	1. 4.9	1. 6.5	73	19.9.	20 3.
18	3. 8.0	3.12.0	46	1. 2.7	1. 4.3	74	18.7.	19.1.
19	3. 0.0	3. 4.0	47	1. 0.5	1. 2.1	75	17.5.	17.8.
20	2.51.9	2.56.0	48	0.58.4	1. 0.0	76	16 3.	16.5.
21	2.44.2	2.48.2	49	0.56.4	0.57.9	77	15.1.	15.3.
22	2.36.9	2.40.8	50	0 54 5	0.55.8	78	13.9	14.1.
23	2.30.0	2.33.7	51	0.52.6	0.53.8	79	12.7.	12.9
24	2.23.5	2.27.0	52	0.50.8	0.51.9	80	11.5.	11 7.
25	2.17.4	2.20.7	53	0.49.0	0.50.0	81	10 4.	10.5.
26	2.11.7	2.14.8	54	0.47.2	0.48.2	82	9.2.	9.4.
27	2. 6.3	2. 9.3	55	0.45 5	0.46.5	83	8.1.	8 3.
28	2. 1.1	2. 4.0	56	0.43.8	0.44 8	84	6.9.	7.1.
29	1.56.2	1.59.0	57	0.42 2	0.43.2	85	5.7.	5.9.
30	1.51.7	1.54.4	58	0.40.6	0.41.6	86	4.6.	4.7.
31	1.47.4	1.50.0	59	0.39.1	0.40.0	87	3.4.	3.5.
32	1.43.3	1.45.8	60	0.37.6	0.38.5	88	2.3.	2.4.
33	1.39.3	1.41.8	61	0.36.1	0.37.0	89	1.1.	1.2.
34	1.35.6	1 38.0	62	0.34.7	0.35.5	90	0.0.	0 0.

TABUL[illegible] VI[illegible]

Par[illegible] Solis a[illegible] [illegible] dia[illegible] dus.

Altitudo.	Parallaxis.
G.	S [illegible]
0	8 [illegible]
3	8 7
6	8 6
9	8 [illegible]
12	8 5
15	8 4
18	8 2
21	8 1
24	7 9
27	7 7
30	7 5
33	7 3
36	7 0
39	6 8
42	6 5
45	6 2
48	5 8
51	5 5
54	5 1
57	4 7
60	4 3
63	3 9
66	3 5
69	3 1
72	2 7
75	2 3
78	1 8
81	1 4
84	0 9
87	0 4
90	0 0

Tabula VII.

Augmentum Diametri horizont. lunæ ad diverſos altitudinum gradus ſupra horizontem.

Alt. ☉	29′½	30′	30′½	31′	31′½	32′	32′½	33′	33′½	34′
	Diameter Lunæ horizontalis.									
0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0	0″ 0
5	2 4	2 5	2 6	2 7	2 8	2 9	3 0	3 1	3 2	3 3
10	4 9	5 1	5 2	5 4	5 6	5 8	5 9	6 1	6 3	6 5
15	7 2	7 5	7 7	8 0	8 3	8 6	8 8	9 1	9 4	9 7
18	8 6	8 8	9 1	9 4	9 7	10 0	10 4	10 8	11 2	11 6
20	9 5	10 0	10 3	10 6	10 9	11 3	11 6	12 0	12 4	12 8
22	10 6	11 0	11 3	11 6	12 0	12 4	12 8	13 2	13 6	14 0
24	11 5	11 9	12 3	12 7	12 1	13 5	13 9	14 3	14 7	15 2
26	12 3	12 8	13 2	13 6	14 1	14 6	15 0	15 4	15 9	16 4
28	13 2	13 7	14 1	14 6	15 1	15 6	16 1	16 6	17 1	17 6
30	14 0	14 6	15 1	15 6	16 1	16 6	17 1	17 6	18 1	18 7
32	14 8	15 5	16 0	16 5	17 0	17 6	18 1	18 6	19 2	19 8
34	15 7	16 3	16 8	17 4	18 0	18 6	19 1	19 7	20 3	20 9
36	16 4	17 1	17 7	18 3	18 9	19 5	20 1	20 7	21 3	22 0
38	17 2	18 9	18 5	19 1	19 7	20 4	21 0	21 7	22 4	23 1
40	18 0	18 7	19 3	20 0	20 6	21 3	22 0	22 7	23 4	24 1
42	18 7	19 5	20 1	20 8	21 5	22 2	22 9	23 6	24 3	25 0
44	19 5	20 2	20 9	21 6	22 3	23 0	23 7	24 4	25 2	26 0
46	20 2	21 0	21 7	22 4	23 1	23 8	24 5	25 3	26 1	26 9
48	20 9	21 7	22 4	23 1	23 8	24 6	25 4	26 2	27 0	27 8
50	21 5	22 2	23 0	23 8	24 6	25 4	26 2	27 0	27 8	28 7
52	22 1	22 9	23 7	24 5	25 3	26 1	26 9	27 7	28 6	29 5
54	22 7	23 5	24 3	25 1	25 9	26 8	27 6	28 5	29 4	30 3
56	23 3	24 1	24 9	25 7	26 6	27 5	28 3	29 2	30 1	31 0
58	23 8	24 7	25 5	26 3	27 2	28 1	29 0	29 9	30 8	31 7
60	24 3	25 2	26 0	26 9	27 8	28 7	29 6	30 5	31 4	32 4
62	24 5	25 7	26 5	27 4	28 3	29 2	30 1	31 0	32 0	33 0
64	25 4	26 2	27 0	27 9	28 8	29 7	30 6	31 6	32 6	33 6
66	25 7	26 6	27 5	28 4	29 3	30 2	31 2	32 2	33 2	34 2
68	26 1	27 0	27 9	28 8	29 7	30 7	31 7	32 7	33 7	34 7
70	26 5	27 4	28 3	29 2	30 1	31 1	32 1	33 1	34 1	35 2
75	27 3	28 1	29 0	29 9	30 9	31 9	32 9	33 9	35 0	36 1
80	27 8	28 7	29 6	30 6	31 6	32 6	33 6	34 8	35 7	36 [illegible]
90	28 1	29 1	30 1	31 1	32 1	33 2	34 2	35 3	36 2	37 [illegible]

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad fingulos quosvis gradus fupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	54′ 0″		54′30″		55′ 0″		55′30″		56′0″		56′30″		57′0″		57′30″		58′ 0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S
0	54	0	54	30	55	0	55	30	56	0	56	30	57	0	57	30	58	0
1	53	59	54	29	54	59	55	29	55	59	56	29	56	59	57	29	57	59
2	53	57	54	27	54	57	55	27	55	57	56	27	56	57	57	27	57	57
3	53	55	54	25	54	55	55	25	55	55	56	25	56	55	57	25	57	55
4	53	51	54	21	54	51	55	21	55	51	56	21	56	51	57	21	57	51
5	53	47	54	17	54	47	55	17	55	46	56	16	56	46	57	16	57	46
6	53	42	54	12	54	42	55	12	55	41	56	11	56	41	57	11	57	41
7	53	35	54	5	54	35	55	5	55	34	56	4	56	34	57	4	57	34
8	53	28	53	58	54	28	54	58	55	27	55	57	56	27	56	56	57	26
9	53	20	53	50	54	20	54	50	55	19	55	49	56	19	56	48	57	17
10	53	10	53	40	54	10	54	40	55	9	55	39	56	9	56	37	57	7
11	53	0	53	29	53	59	54	29	54	58	55	28	55	57	56	26	56	56
12	52	49	53	19	53	48	54	17	54	46	55	15	55	45	56	14	56	44
13	52	36	53	5	53	35	54	4	54	33	55	2	55	22	56	1	56	30
14	52	23	52	52	53	22	53	51	54	20	54	48	55	19	55	48	56	16
15	52	9	52	38	53	7	53	37	54	6	54	36	55	5	55	34	56	2
16	51	53	52	20	52	51	53	21	53	50	54	19	54	48	55	17	55	45
17	51	37	52	2	52	35	53	4	53	33	54	2	54	31	55	0	55	28
18	51	22	51	51	52	19	52	48	53	16	53	45	54	14	54	42	55	10
19	51	3	51	32	52	0	52	28	52	56	53	24	53	52	54	20	54	50
20	50	44	51	13	51	41	52	2	52	36	53	2	53	30	53	58	54	30
21	50	25	50	53	51	21	51	49	52	17	52	43	53	9	53	35	53	59
22	50	3	50	31	50	59	51	27	51	55	52	21	52	47	53	14	53	46
23	49	41	50	9	50	37	51	5	51	33	51	59	52	25	52	54	53	23
24	49	25	49	48	50	15	50	43	51	10	51	37	52	4	52	31	52	59
25	48	55	49	21	49	48	50	18	50	45	51	11	51	39	52	6	52	33
26	48	30	48	54	49	21	49	53	50	20	50	46	51	14	51	41	52	7
27	48	7	48	34	49	1	49	28	49	54	50	20	50	43	51	15	51	41
28	47	40	48	8	48	33	49	0	49	26	49	52	50	19	50	46	51	12
29	47	11	47	40	48	5	48	32	48	58	49	24	49	50	50	17	50	42
30	46	46	47	12	47	38	48	4	48	30	48	56	49	22	49	48	50	14

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																			
	58′0″		58′ 30″		59′ 0″		59′30″		60′ 0″		60′30″		61′ 0″		61′30″		62′0″			
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M	S		
0	58	0	58	30	59	0	59	30	60	0	60	30	61	0	61	30	52	0		
1	57	59	58	28	58	58	59	28	59	58	60	28	60	59	61	29	51	59		
2	57	57	58	26	58	56	59	25	59	54	60	25	60	57	61	27	61	57		
3	57	55	58	24	58	53	59	22	59	50	60	22	60	55	61	25	61	55		
4	57	51	58	20	58	49	59	19	59	47	60	19	60	51	61	21	61	51		
5	57	46	58	16	58	45	59	15	59	44	60	15	60	46	61	16	61	46		
6	57	41	58	11	58	41	59	11	59	40	60	10	60	40	61	10	61	40		
7	57	34	58	3	58	35	59	4	59	33	60	3	60	32	61	3	61	32		
8	57	26	57	55	58	27	58	56	59	25	59	55	60	25	60	55	61	23		
9	57	17	57	47	58	17	58	47	59	16	59	46	60	15	60	45	61	14		
10	57	7	57	37	58	7	58	36	59	5	59	35	60	4	60	31	61	[illegible]		
11	56	56	57	26	57	56	58	25	58	53	59	24	59	52	60	22	60	52		
12	56	44	57	14	57	43	58	12	58	41	59	11	59	40	60	9	60	38		
13	56	30	56	59	57	28	57	57	58	26	53	56	59	25	59	54	60	23		
14	55	16	56	45	57	14	57	43	58	11	58	42	59	10	59	39	60	8		
15	56	2	56	31	57	0	57	29	57	57	58	27	58	56	59	24	59	52		
16	55	45	56	13	56	42	57	11	57	39	58	9	58	38	59	6	59	36		
17	55	28	55	55	56	24	56	53	57	21	57	51	58	20	58	48	59	18		
18	55	10	55	38	56	7	56	35	57	4	57	32	58	1	58	29	58	56		
19	54	50	55	18	55	46	56	14	56	43	57	11	57	40	58	8	58	34		
20	54	30	54	58	55	25	55	53	56	22	56	50	57	19	57	47	58	12		
21	54	9	54	37	55	5	55	33	56	1	56	29	56	57	57	26	57	52		
22	53	46	54	13	54	41	55	9	55	37	56	5	56	33	57	1	57	27		
23	53	23	53	49	54	17	54	45	55	13	55	41	56	9	56	36	57	2		
24	52	59	53	26	53	54	54	21	54	49	55	16	55	44	56	10	56	36		
25	52	33	53	0	53	28	53	55	54	22	54	49	55	16	55	42	56	9		
26	52	7	52	34	53	2	53	29	53	55	54	22	54	48	55	14	55	42		
27	51	41	52	8	52	25	53	2	53	28	53	54	54	21	54	47	55	11		
28	51	12	51	39	52	5	52	32	52	58	53	24	53	51	54	17	54	44		
29	50	43	51	10	51	35	52	2	52	28	52	54	53	21	53	47	54	14		
30	50	14	50	40	51	5	51	28	51	58	52	24	52	50	53	16	53	42		

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad fingulos quosvis gradus fupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	54′ 0″		54′30″		55′ 0″		55′ 30″		56′0″		56′30″		57′0″		57′30″		58′0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
30	46	46	47	12	47	38	48	4	48	30	48	56	49	22	49	48	50	12
31	46	16	46	42	47	8	47	33	47	59	48	25	48	51	49	16	49	40
32	45	46	46	12	46	38	47	2	47	28	47	54	48	20	48	44	49	8
33	45	17	45	42	46	7	46	32	46	58	47	23	47	48	48	13	48	38
34	44	45	45	10	45	34	45	59	46	25	46	49	47	14	47	39	48	4
35	44	13	44	38	45	1	45	26	45	52	46	15	46	40	47	5	47	30
36	43	41	44	5	44	39	44	54	45	18	45	42	46	6	46	30	46	55
37	43	4	43	31	43	54	44	19	44	42	45	6	45	30	45	54	46	1[illegible]
38	42	27	42	57	43	19	43	44	44	6	44	30	44	54	45	18	45	4[illegible]
39	41	57	42	21	42	44	43	8	43	31	43	55	44	19	44	41	45	5
40	41	20	41	44	42	7	42	31	42	53	43	17	43	40	44	3	44	2[illegible]
41	40	48	41	7	41	30	41	53	42	15	42	39	43	1	43	24	43	45
42	40	7	40	30	40	52	41	15	41	37	42	0	42	23	42	44	43	6
43	39	28	39	51	40	12	40	35	40	56	41	19	41	42	42	3	42	24
44	38	49	39	12	39	32	39	55	40	15	40	38	41	1	41	22	41	42
45	38	10	38	32	38	53	39	15	39	35	39	57	40	19	40	40	41	0
46	37	29	37	51	38	21	38	33	38	53	39	14	39	35	39	56	40	1[illegible]
47	36	48	37	10	37	29	37	51	38	11	38	31	38	51	39	12	39	32
48	36	8	36	28	36	48	37	8	37	28	37	48	38	8	38	29	38	49
49	35	25	35	43	36	4	36	24	36	44	37	3	37	23	37	43	38	3
50	34	42	35	2	35	20	35	40	36	0	36	18	36	38	36	57	37	17
51	33	59	34	18	34	37	34	56	35	15	35	34	35	53	36	12	36	30
52	33	14	33	33	33	51	34	10	34	28	34	47	35	5	35	24	35	42
53	32	29	32	48	33	5	33	24	33	41	34	0	34	17	34	36	34	54
54	31	44	32	2	32	20	32	37	32	55	33	12	33	20	33	47	34	5
55	30	58	31	15	31	33	31	49	32	7	32	23	32	41	32	58	33	15
56	30	12	30	28	30	48	31	1	31	19	31	34	31	52	32	9	32	25
57	29	25	29	41	29	58	30	14	30	30	30	46	31	3	31	19	31	36
58	28	37	28	52	29	9	29	24	29	40	29	56	30	12	30	28	30	44
59	27	49	28	3	28	20	28	34	29	0	29	6	29	21	29	37	29	52
60	27	0	27	15	27	30	27	45	28	50	28	15	28	30	28	45	29	0

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	58′ 0″		58′ 30″		59′ 0″		59′ 30″		60′ 0″		60′ 30″		61′ 0″		61′ 30″		62′ 0″	
G.	M	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S
30	50	14	50	40	51	7	51	32	51	58	52	24	52	50	53	16	53	42
31	49	42	50	8	50	33	50	59	51	25	51	51	52	16	52	42	53	8
32	49	10	49	36	50	0	50	26	50	52	51	18	51	42	52	8	52	34
33	48	38	49	3	49	28	49	53	50	19	50	44	51	9	51	34	52	0
34	48	4	48	28	48	53	49	18	49	43	50	8	50	33	50	57	51	23
35	47	30	47	53	48	18	48	43	49	7	49	32	49	57	50	20	50	46
36	46	55	47	19	47	43	48	7	48	32	48	56	49	21	49	44	50	8
37	46	18	46	42	47	6	47	29	47	54	48	17	48	42	49	5	49	29
38	45	41	46	5	46	29	46	51	47	16	47	38	48	3	48	26	48	50
39	45	5	45	28	45	51	46	14	46	37	47	0	47	24	47	47	48	10
40	44	25	44	48	45	11	45	33	45	56	46	19	46	43	47	5	47	28
41	43	45	44	8	44	31	44	52	45	15	45	38	46	2	46	23	46	46
42	43	6	43	28	43	50	44	12	44	35	44	57	45	20	45	42	46	4
43	42	24	42	46	43	7	43	29	43	52	44	14	44	36	44	58	45	19
44	41	42	42	4	42	24	42	46	43	9	43	31	43	52	44	14	44	34
45	41	0	41	21	41	42	42	3	42	25	42	47	43	9	43	29	43	50
46	40	16	40	37	40	58	41	18	41	40	42	1	42	22	42	42	43	3
47	39	32	39	53	40	14	40	33	40	55	41	15	41	35	41	55	42	16
48	38	49	39	9	39	29	39	49	40	9	40	29	40	49	41	8	41	28
49	38	3	38	22	38	42	39	2	39	21	39	41	40	1	40	19	40	39
50	37	17	37	35	37	55	38	15	38	33	38	53	39	13	39	30	39	50
51	36	30	36	49	37	8	37	27	37	46	38	5	38	24	38	42	39	0
52	35	42	36	0	36	19	36	39	36	56	37	18	37	33	37	51	38	10
53	34	54	35	11	35	30	35	49	36	7	36	25	36	42	37	0	37	18
54	34	5	34	23	34	41	34	59	35	16	35	33	35	51	36	8	36	26
55	33	15	33	33	33	50	34	7	34	24	34	41	34	59	35	15	35	33
56	32	25	32	43	32	59	33	15	33	32	33	49	34	7	34	22	34	40
57	31	36	31	52	32	8	32	24	32	41	32	57	33	14	33	30	33	46
58	30	44	31	0	31	15	31	31	31	47	32	3	32	19	32	35	32	51
69	29	52	30	8	30	22	30	38	30	53	31	9	31	24	31	40	31	56
50	29	0	29	15	29	30	29	45	30	0	30	1[illegible]	30	30	30	45	31	0

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ.																	
	54′ 0″		54′ 30″		55′ 0″		55′ 30″		56′ 0″		56′ 30″		57′ 0″		57′ 30″		58′ 0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
60	27	0	27	15	27	30	27	45	28	0	28	15	28	30	28	45	29	0
61	26	10	26	25	26	39	26	54	27	8	27	23	27	37	27	52	28	7
62	25	20	25	35	25	48	26	3	26	16	26	31	26	44	26	59	27	14
63	24	31	24	44	24	58	25	11	25	25	25	39	25	52	26	6	26	20
64	23	40	23	53	24	6	24	19	24	32	24	45	24	58	25	11	25	25
65	22	49	23	2	23	14	23	27	23	39	23	51	24	4	24	16	24	30
66	21	58	22	10	22	22	22	34	22	46	22	58	23	10	23	22	23	35
67	21	6	21	17	21	29	21	40	21	52	22	4	22	15	22	27	22	39
68	20	14	20	24	20	36	20	46	20	58	21	10	21	20	21	32	21	43
69	19	21	19	31	19	42	19	53	20	4	20	15	20	26	20	37	20	47
70	18	28	18	37	18	48	18	58	19	9	19	19	19	29	19	40	19	50
71	17	35	17	43	17	54	18	3	18	14	18	23	18	32	18	43	18	53
72	16	41	16	50	16	59	17	8	17	18	17	27	17	36	17	45	17	55
73	15	46	15	56	16	4	16	13	16	22	16	31	16	39	16	48	16	57
74	14	52	15	1	15	9	15	18	15	26	15	34	15	42	15	51	15	59
75	13	58	14	6	14	14	14	22	14	29	14	37	14	45	14	53	15	0
76	13	3	13	11	13	18	13	26	13	32	13	40	13	47	13	55	14	1
77	12	8	12	16	12	22	12	29	12	35	12	43	12	49	12	56	13	2
78	11	13	11	20	11	26	11	32	11	38	11	45	11	51	11	57	12	3
79	10	18	10	24	10	30	10	35	10	41	10	47	10	53	10	58	11	4
80	9	23	9	28	9	33	9	38	9	43	9	49	9	54	9	59	10	4
81	8	27	8	32	8	36	8	41	8	45	8	50	8	55	9	0	9	4
82	7	31	7	36	7	39	7	44	7	47	7	52	7	56	8	0	8	4
83	6	35	6	39	6	42	6	46	6	49	6	53	6	57	7	0	7	4
84	5	38	5	42	5	45	5	48	5	51	5	54	5	57	6	0	6	4
85	4	42	4	45	4	48	4	50	4	53	4	55	4	58	5	0	5	3
86	3	46	3	48	3	50	3	52	3	54	3	56	3	59	4	0	4	2
87	2	49	2	51	2	52	2	54	2	55	2	57	2	59	3	1	3	3
88	1	53	1	54	1	55	1	56	1	57	1	58	2	0	2	1	2	1
89	0	57	0	57	0	58	0	58	0	59	0	59	1	0	1	1	1	[illegible]
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABULA VIII.

Parallaxis altitudinis apparentis Lunæ ad ſingulos quosvis gradus ſupra horizontem.

Altit.	Parallaxis horizontalis Lunæ																	
	58′ 0″		58′ 30″		59′ 0″		59′ 30″		60′ 0″		60′ 30″		61′ 0″		61′ 30″		62′ 0″	
G.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.	M.	S.
60	29	0	29	15	29	30	29	45	30	0	30	15	30	30	30	45	31	0
61	28	7	28	21	28	36	28	50	29	5	29	19	29	34	29	48	30	3
62	27	14	27	27	27	42	27	55	28	10	28	23	28	38	28	51	29	6
63	26	20	26	33	26	47	27	0	27	14	27	27	27	41	27	54	28	8
64	25	25	25	38	25	51	26	4	26	17	26	30	26	43	26	56	27	9
65	24	30	24	43	24	55	25	8	25	20	25	33	25	45	25	58	26	10
66	23	35	23	47	23	59	24	12	24	24	24	36	24	48	25	0	25	12
67	22	39	22	49	23	2	23	14	23	26	23	38	23	49	24	1	24	11
68	21	43	21	53	22	5	22	16	22	28	22	40	22	51	23	1	23	12
69	20	47	20	58	21	9	21	19	21	30	21	41	21	52	22	1	22	12
70	19	50	20	0	20	10	20	20	20	30	20	41	20	52	21	1	21	10
71	18	53	19	2	19	11	19	21	19	31	19	41	19	51	20	1	20	10
72	17	55	18	4	18	13	18	23	18	32	18	41	18	51	18	59	19	8
73	16	57	17	5	17	14	17	23	17	32	17	41	17	50	17	58	18	7
74	15	59	16	6	16	15	16	23	16	32	16	40	16	49	16	57	17	5
75	15	0	15	7	15	15	15	23	15	31	15	39	15	47	15	55	16	3
76	14	1	14	8	14	15	14	23	14	30	14	38	14	45	14	52	15	0
77	13	2	13	9	13	15	13	22	13	29	13	36	13	43	13	49	13	56
78	12	3	12	9	12	15	12	21	12	28	12	34	12	40	12	46	12	52
79	11	4	11	9	11	15	11	20	11	27	11	32	11	38	11	43	11	49
80	10	4	10	9	10	14	10	19	10	25	10	30	10	35	10	40	10	46
81	9	4	9	8	9	13	9	18	9	23	9	27	9	32	9	37	9	42
82	8	4	8	8	8	12	8	17	8	21	8	25	8	29	8	33	8	38
83	7	4	7	8	7	11	7	15	7	19	7	22	7	26	7	29	7	33
84	6	4	6	7	6	10	6	13	6	16	6	19	6	22	6	25	6	28
85	5	3	5	6	5	9	5	11	5	14	5	16	5	19	5	21	5	24
86	4	3	4	5	4	7	4	9	4	11	4	13	4	15	4	17	4	19
87	3	3	3	4	3	5	3	6	3	8	3	9	3	11	3	12	3	14
88	2	2	2	3	2	4	2	4	2	6	2	6	2	8	2	8	2	10
89	1	2	1	2	1	2	1	2	1	3	1	3	1	4	1	4	1	5
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABULA IX.

Converſio temporis primi mobilis in partes Æquatoris.

Horæ.	Gradus.	Min. / Sec. / Tert.	Grad. Min / Min. Sec / Sec. Tert.	Min. / Sec. / Tert.	Grad. Min / Min. Sec / Sec. Tert.
1	15	1	0. 15	31	7. 45
2	30	2	0. 30	32	8. 0
3	45	3	0. 45	33	8. 15
4	60	4	1. 0	34	8. 30
5	75	5	1. 15	35	8. 45
6	90	6	1. 30	36	9. 0
7	105	7	1. 45	37	9. 15
8	120	8	2. 0	38	9. 30
9	135	9	2. 15	39	9. 45
10	150	10	2. 30	40	10. 0
11	165	11	2. 45	41	10. 15
12	180	12	3. 0	42	10. 30
13	195	13	3. 15	43	10. 45
14	210	14	3. 30	44	11. 0
15	225	15	3. 45	45	11. 15
16	240	16	4. 0	46	11 30
17	255	17	4. 15	47	11. 45
18	270	18	4. 30	48	12. 0
19	285	19	4. 45	49	12. 15
20	300	20	5. 0	50	12. 30
21	315	21	5. 15	51	12. 45
22	330	22	5. 30	52	13. 0
23	345	23	5. 45	53	13. 15
24	360	24	6. 0	54	13. 30
25	375	25	6. 15	55	13. 45
26	390	26	6. 30	56	14. 0
27	405	27	6. 45	57	14. 15
28	420	28	7. 0	58	14. 30
29	435	29	7. 15	59	14. 45
30	450	30	7. 30	60	15. 0

TABULA X.

Converſio partium Æquatoris in tempus primi mobilis.

Grad. / Min. / Sec.	Horæ. Min. / Min. Sec. / Sec. Ter.	Grad. / Min. / Sec.	Hor. Min. / Min. Sec / Sec. Tert.	Grad.	Hor. Min.
1	0. 4	31	2. 4	70	4. 40
2	0. 8	32	2. 8	80	5. 20
3	0. 12	33	2. 12	90	6. 0
4	0. 16	34	2. 16	100	6. 40
5	0. 20	35	2. 20	110	7. 20
6	0. 24	36	2. 24	120	8. 0
7	0. 28	37	2. 28	130	8. 40
8	0. 32	38	2. 32	140	9. 20
9	0. 36	39	2. 36	150	10. 0
10	0. 40	40	2. 40	160	10. 40
11	0. 44	41	2. 44	170	11. 20
12	0. 48	42	2. 48	180	12. 0
13	0. 52	43	2. 52	190	12. 40
14	0. 56	44	2. 56	200	13. 20
15	1. 0	45	3. 0	210	14. 0
16	1. 4	46	3. 4	220	14. 40
17	1. 8	47	3. 8	230	15. 20
18	1. 12	48	3. 12	240	16. 0
19	1. 16	49	3. 16	250	16. 40
20	1. 20	50	3. 20	260	17. 20
21	1. 24	51	3. 24	270	18. 0
22	1. 28	52	3. 28	280	18. 40
23	1. 32	53	3. 32	290	19. 20
24	1. 36	54	3. 36	300	20. 0
25	1. 40	55	3. 40	310	20. 40
26	1. 44	56	3. 44	320	21. 20
27	1. 48	57	3. 48	330	22. 0
28	1. 52	58	3. 52	340	22. 40
29	1. 56	59	3. 56	350	23. 20
30	2. 0	60	4. 0	360	24. 0

TABULA XI.

Converſio partium Æquatoris in tempus Solare medium.

Grad. / Min. / Sec.	Hor. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quart.	Grad. / Min. / Sec.	Hor. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quar.	Grad.	Hor. Min. S.
1	0. 3. 59	31	2. 3. 39	70	4. 39. 14
2	0. 7. 58	32	2. 7. 39	80	5. 19. 7
3	0. 11. 58	33	2. 11. 38	90	5. 59. 1
4	0. 15. 57	34	2. 15. 38	100	6. 38. 54
5	0. 19. 56	35	2. 19. 37	110	7. 18. 57
6	0. 23. 55	36	2. 23. 36	120	7. 58. 42
7	0. 27. 54	37	2. 27. 35	130	8. 38. 35
8	0. 31. 53	38	2. 31. 35	140	9. 18. 23
9	0. 35. 52	39	2. 35. 34	150	9. 58. 23
10	0. 39. 52	40	2. 39. 33	160	10. 38. 15
11	0. 43. 52	41	2. 43. 32	170	11. 18. 8
12	0. 47. 52	42	2. 47. 32	180	11. 58. 2
13	0. 51. 51	43	2 51. 31	190	12. 37. 55
14	0. 55. 51	44	2 55. 30	200	13. 17. 48
15	0. 59. 50	45	2. 59. 30	210	13. 57. 42
16	1. 3. 49	46	3. 3. 29	220	14. 37. 35
17	1. 7. 48	47	3. 7. 28	230	15. 17. 28
18	1. 11. 47	48	3. 11. 27	240	15. 57. 23
19	1. 15. 47	49	3. 15. 27	250	16. 37. 16
20	1. 19. 46	50	3. 19. 27	260	17. 17. 9
21	1. 23. 45	51	3. 23 26	270	17. 57. 3
22	1. 27. 45	52	3. 27. 25	280	18. 36. 56
23	1. 31. 44	53	3. 31. 24	290	19. 16. 49
24	1. 35. 43	54	3. 35. 24	300	19. 56. 43
25	1. 39. 43	55	3. 39. 23	310	20. 36. 36
26	1. 43. 42	56	3. 43. 23	320	21. 16. 30
27	1. 47. 41	57	3. 47. 23	330	21. 56. 24
28	1. 51. 40	58	3. 51. 22	340	22. 36. 17
29	1. 55. 40	59	3. 55. 22	350	23. 16. 11
30	1. 59 40	60	3. 59. 21	360	23. 56. 4

TABULA XII.

Converfio temporis Solaris medii in partes Æquatoris.

Hor.	Grad. Min. Sec.	Min. / Sec. / Tert.	Grad. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quart.	Min. / Sec. / Tert.	Grad. Min. Sec. / Min. Sec. Tert. / Sec. Tert. Quart.
1	15. 2. 28	1	0. 15. 2	31	7. 46. 16
2	30. 4. 56	2	0. 30. 5	32	8. 1. 19
3	45. 7. 24	3	0. 45. 7	33	8. 16. 21
4	60. 9. 51	4	1. 0. 10	34	8. 31. 24
5	75. 12. 19	5	1. 15. 12	35	8. 46. 26
6	90. 14. 47	6	1. 30. 15	36	9. 1. 29
7	105. 17. 15	7	1. 45. 17	37	9. 16. 31
8	120. 19. 43	8	2. 0. 20	38	9. 31. 34
9	135. 22. 11	9	2. 15. 22	39	9. 46. 36
10	150. 24. 38	10	2. 30. 25	40	10. 1. 39
11	165. 27. 6	11	2. 45. 27	41	10. 16. 41
12	180. 29. 34	12	3 0. 30	42	10. 31. 43
13	195. 32. 2	13	3. 15. 32	43	10. 46. 46
14	210. 34. 30	14	3. 30. 34	44	11. 1. 48
15	225. 36. 58	15	3. 45. 37	45	11. 16. 51
16	240. 39. 26	16	4. 0. 39	46	11. 31. 53
17	255. 41. 53	17	4. 15. 41	47	11. 46. 56
18	270. 44. 21	18	4. 30. 44	48	12. 1. 58
19	285. 46. 49	19	4. 45. 47	49	12. 17. 1
20	300. 49. 17	20	5. 0. 49	50	12. 32. 3
21	315. 51. 45	21	5. 15. 52	51	12. 47. 6
22	330. 54. 13	22	5. 30. 54	52	13. 2. 8
23	345. 56. 40	23	5. 45. 57	53	13. 17. 11
24	360. 59. 8	24	6. 0. 59	54	13. 32. 13
25	376. 1. 36	25	6. 16. 2	55	13. 47. 16
26	391. 4. 4	26	6. 31. 4	56	14. 2. 18
27	406. 6. 32	27	6. 46. 7	57	14. 17. 21
28	421. 9. 0	28	7. 1. 9	58	14. 32. 23
29	436. 11. 28	29	7. 16. 11	59	14. 47. 26
30	451. 13. 56	30	7. 31. 14	60	15. 2. 28

TABULA XIII.

Correctio horæ Meridianæ prodeuntis ex altitudinibus correſpondentibus Solis ſub æquatore, adhibenda *primo* ubique terrarum.

Intervallum horarum a meridie ad tempus obſervationis.

Locus Solis verus in Zodiaco.		1h.40m	2h.0m.	2h.20m	2h.40m	3h.0m.	3h 20m	3h.40m	4h.0m.	
		S.	S.	S.	S.	S.	S.	S.	S.	
♈	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Additiva.
	10	0. 96	0. 93	0. 89	0. 85	0. 80	0. 75	0. 69	0. 62	
	20	1. 89	1. 76	1. 69	1. 61	1. 53	1. 43	1. 30	1. 17	
♉	0	2. 49	2. 41	2. 32	2. 21	2. 09	1. 95	1. 79	1. 61	
	10	2. 90	2. 81	2. 70	2. 58	2. 43	2. 27	2. 08	1. 87	
	20	2. 97	2. 88	2. 77	2. 64	2. 49	2. 32	2. 13	1. 92	
♊	0	2. 68	2. 59	2. 50	2. 38	2. 25	2. 09	1. 92	1. 73	
	10	2. 02	1. 96	1. 89	1. 80	1. 70	1. 58	1. 45	1. 31	
	20	1. 10	1. 06	1. 02	0. 97	0. 92	0. 86	0. 79	0. 71	
♋	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Subtractiva.
	10	1. 10	1. 06	1. 02	0. 97	0. 92	0. 86	0. 79	0. 71	
	20	2. 02	1. 96	1. 88	1. 79	1. 70	1. 58	1. 45	1. 31	
♌	0	2. 66	2. 58	2. 48	2. 37	2. 24	2. 08	1. 91	1. 72	
	10	2. 94	2. 85	2. 74	2. 62	2. 47	2. 30	2. 11	1. 90	
	20	2. 87	2. 78	2. 68	2. 56	2. 41	2. 25	2. 06	1. 86	
♍	0	2. 47	2. 40	2. 31	2. 20	2. 08	1. 94	1. 78	1. 60	
	10	1. 81	1. 75	1. 68	1. 60	1. 52	1. 42	1. 29	1. 16	
	20	0. 95	0. 92	0. 89	0. 85	0. 80	0. 74	0. 68	0. 61	
♎	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Additiva.
	10	0. 96	0. 93	0. 89	0. 85	0. 80	0. 75	0. 69	0. 62	
	20	1. 84	1. 78	1. 72	1. 65	1. 56	1. 46	1. 34	1. 20	
♏	0	2. 55	2. 47	2. 38	2. 27	2. 14	2. 00	1. 83	1. 65	
	10	3. 00	2. 91	2. 80	2. 67	2. 52	2. 35	2. 15	1. 94	
	20	3. 10	3. 01	2. 89	2. 76	2. 61	2. 43	2. 23	2. 01	
♐	0	2. 83	2. 74	2. 64	2. 52	2. 38	2. 21	2. 03	1. 83	
	10	2. 15	2. 08	2. 00	1. 91	1. 80	1. 68	1. 54	1. 39	
	20	1. 17	1. 13	1. 09	1. 04	0. 98	0. 91	0. 84	0. 75	
♑	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	Correctio Subtractiva.
	10	1. 17	1. 13	1. 09	1. 04	0. 98	0. 91	0. 84	0. 75	
	20	2. 15	2. 09	2. 01	1. 92	1. 81	1. 69	1. 55	1. 39	
♒	0	2. 84	2. 76	2. 64	2. 56	2. 39	2. 22	2. 04	1. 84	
	10	3. 13	3. 03	2. 91	2. 78	2. 62	2. 45	2. 25	2. 02	
	20	3. 02	2. 93	2. 82	2. 69	2. 54	2. 37	2. 16	1. 95	
♓	0	2. 57	2. 49	2. 40	2. 29	2. 16	2. 01	1. 85	1. 66	
	10	1. 82	1. 78	1. 73	1. 66	1. 56	1. 46	1. 33	1. 20	
	20	0. 97	0. 94	0. 90	0. 86	0. 81	0. 76	0. 69	0. 63	
♈	0	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	0. 00	

TABULA XIV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correspondentibus Solis sub parallelo 45° adhibenda.

Intervallum horarium à meridie ad tempus observationis.

		1h.40m	2h.0 m.	2h.20m	2h.40m	3h. 0m.	3h.20m	3h.40m	4h.0m.	
		s.	s.	s.	s.	s.	s.	s.	s.	
♈	0	15.53	15.78	16.09	16.37	16.74	17.17	17.66	18.23	Correctio subtractiva in hemisphær. Boreali Additiva in Australi.
	10	15.25	15.50	15 80	16.08	16.44	16.86	17.35	17.91	
	20	14.56	14.80	15.09	15.35	15.70	16.10	16.56	17.10	
♉	0	13.49	13.71	13.97	14.22	14.54	14.91	15.34	15.83	
	10	12.03	12.23	12.47	12.69	12.97	13.30	13.69	14.13	
	20	10.20	10.37	10.57	10.76	11.00	11.28	11.61	11.98	
♊	0	8.02	8.15	8.31	8.45	8.64	8.86	9.12	9.41	
	10	5.53	5.62	5.73	5.83	5.96	6.12	6.29	6.50	
	20	2 82	2.87	2.93	2.98	3.05	3.12	3.21	3.32	
♋	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Correctio additiva in hemisphærio Boreal. Subtractiva in Australi.
	10	2.82	2.87	2.92	[illegible].97	3.04	3.12	3.21	3.31	
	20	5.51	5.60	5.71	5.81	5.95	6.10	6.27	6.48	
♌	0	7.98	8.11	8.27	8.41	8.60	8.82	9.08	9.38	
	10	10.11	10.28	10.48	10.66	10.90	11.18	11.51	11.88	
	20	11.94	12.17	12.37	12.59	12.87	13.20	13.58	14.02	
♍	0	13.37	13.59	13.85	14.10	14.41	14.78	15.21	15.70	
	10	14.42	14.66	14.94	15.20	15.55	15.94	16.41	16.93	
	20	15.09	15.34	15.64	15.92	16.27	16.69	17.17	17.72	
♎	0	15.37	15.63	15.93	16.21	16.58	17.00	17.49	18.05	
	10	15.26	15.52	15.81	16.09	16.46	16.87	17.36	17.92	
	20	14.75	15.00	15.29	15.56	15.91	16.31	16.78	17.32	
♏	0	13.82	14.05	14.32	14.57	14.90	15.28	15.74	16.23	
	10	12.46	12.66	12.91	13.14	13.43	13.78	14 17	14.63	
	20	10.67	10.84	11.05	11.25	11.50	11.80	12.14	12.53	
♐	0	8.46	8.89	8.76	8.91	9.12	9.35	9.62	9.93	
	10	5.87	5.97	6.08	6.19	6.33	6.49	6.68	6.89	
	20	3.01	3.06	3.12	3.18	3.25	3.33	3.43	3.54	
♑	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Correctio subtractiva in hemisphærio boreali. Additiva in Australi.
	10	3.02	3.07	3.13	3.18	3.25	3.34	3.43	3.54	
	20	5.89	6.00	6.10	6.23	6.36	6.53	6.71	6.92	
♒	0	8.42	8.64	8.80	8.96	9.16	9.39	9.67	9. 8	
	10	10.74	10.91	11.12	11.32	11.58	11.90	12.21	12.61	
	20	12.56	12.77	13.01	13.24	13.54	13.88	14.29	14.74	
♓	0	13.94	14.17	14.45	14.70	15.03	15.41	15.86	16.37	
	10	14.90	15.14	15.43	15.71	16.06	16.47	16.94	17.48	
	20	15.37	15.63	15.93	16.21	16.57	17.00	17.49	18.05	
♈	0	15.53	15.78	16.09	16.37	16.74	17.17	17.66	18.23	

Ex hac, & antecedente Tabula facile supputatur Correctio meridiei pro quavis Poli elevatione ... ad logarithmum correctionis in hac Tabula repertæ, addatur logarithmus tangentis elevationis datæ Poli, summa logarithmorum erit logarithmus correctionis quæsitæ, quæ per partem in Tabula antecedente inventam adhuc coæquanda est.

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus pro ſingulis latitudinis gradibus, correctioni ſub parallelo 45° ſubſtituenda.

Correctio ſub parali. 45°	Gradus Latitudinis Loci									
	1	2	3	4	5	6	7	8	9	10
Sec.	Sec	Sec.	Sec	Sec	Sec	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 00	0 01	0 02	0 03	0 04	0 05	0 06	0 07	0 07	0 09
1 00	0 01	0 03	0 04	0 06	0 08	0 10	0 12	0 14	0 15	0 18
1 50	0 02	0 04	0 06	0 09	0 12	0 15	0 18	0 21	0 23	0 27
2 00	0 03	0 06	0 09	0 13	0 17	0 21	0 24	0 28	0 31	0 35
2 50	0 04	0 08	0 12	0 16	0 21	0 26	0 30	0 35	0 39	0 44
3 00	0 05	0 10	0 15	0 20	0 26	0 31	0 37	0 42	0 47	0 53
3 50	0 05	0 11	0 17	0 23	0 30	0 36	0 43	0 49	0 54	0 62
4 00	0 06	0 13	0 20	0 27	0 35	0 42	0 49	0 56	0 62	0 70
4 50	0 07	0 15	0 22	0 30	0 39	0 47	0 55	0 63	0 70	0 79
5 00	0 08	0 17	0 25	0 34	0 44	0 52	0 62	0 70	0 78	0 88
5 50	0 09	0 18	0 27	0 37	0 48	0 57	0 68	0 77	0 86	0 97
6 00	0 10	0 20	0 30	0 41	0 52	0 63	0 74	0 84	0 94	1 05
6 50	0 11	0 22	0 33	0 44	0 56	0 68	0 80	0 91	1 02	1 14
7 00	0 12	0 24	0 36	0 48	0 61	0 73	0 86	0 99	1 10	1 23
7 50	0 12	0 25	0 38	0 51	0 65	0 78	0 92	1 06	1 18	1 31
8 00	0 13	0 27	0 41	0 55	0 69	0 84	0 99	1 13	1 26	1 40
8 50	0 14	0 29	0 43	0 58	0 73	0 89	1 05	1 20	1 34	1 49
9 00	0 15	0 31	0 46	0 62	0 78	0 94	1 11	1 27	1 42	1 58
9 50	0 16	0 32	0 48	0 65	0 82	0 99	1 17	1 34	1 50	1 66
10 00	0 17	0 34	0 51	0 69	0 87	1 05	1 23	1 41	1 58	1 75
10 50	0 18	0 36	0 54	0 72	0 91	1 10	1 29	1 48	1 65	1 84
11 00	0 19	0 38	0 57	0 76	0 96	1 15	1 36	1 55	1 73	1 93
11 50	0 19	0 39	0 59	0 79	1 00	1 20	1 42	1 62	1 81	2 01
12 00	0 20	0 41	0 62	0 83	1 04	1 25	1 48	1 69	1 89	2 10
12 50	0 21	0 43	0 64	0 86	1 08	1 30	1 54	1 76	1 97	2 19
13 00	0 22	0 45	0 67	0 90	1 13	1 36	1 60	1 83	2 05	2 28
13 50	0 23	0 46	0 70	0 94	1 17	1 41	1 66	1 90	2 13	2 37
14 00	0 24	0 48	0 73	0 98	1 22	1 46	1 72	1 98	2 21	2 46
14 50	0 25	0 50	0 76	1 01	1 26	1 51	1 78	2 05	2 28	2 54
15 00	0 26	0 52	0 78	1 05	1 30	1 57	1 84	2 12	2 36	2 63
15 50	0 27	0 54	0 81	1 08	1 34	1 62	1 90	2 19	2 44	2 72
16 00	0 28	0 56	0 84	1 12	1 39	1 67	1 96	2 26	2 52	2 81
16 50	0 28	0 57	0 86	1 15	1 43	1 72	2 02	2 33	2 60	2 90
17 00	0 29	0 59	0 89	1 19	1 48	1 78	2 09	2 40	2 68	2 98
17 50	0 30	0 61	0 91	1 22	1 52	1 83	2 15	2 47	2 76	3 07
18 00	0 31	0 63	0 94	1 26	1 57	1 89	2 21	2 54	2 84	3 16
18 50	0 32	0 64	0 96	1 29	1 61	1 94	2 27	2 61	2 92	3 25

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus pro ſingulis latitudinis gradibus, correctioni ſub parallelo 45° ſubſtituenda.

	Gradus Latitudinis Loci.									
	11	12	13	14	15	16	17	18	19	20
Sec.	Sec.	Sec.	Sec	Sec.	Sec.	Sec.	Sec.	Sec	Sec.	Sec.
0 50	0 09	0 10	0 11	0 12	0 13	0 14	0 15	0 16	0 17	0 18
1 00	0 19	0 21	0 23	0 25	0 26	0 28	0 31	0 33	0 34	0 36
1 50	0 29	0 31	0 34	0 37	0 40	0 42	0 46	0 49	0 51	0 54
2 00	0 39	0 42	0 46	0 50	0 53	0 57	0 61	0 65	0 68	0 73
2 50	0 48	0 52	0 57	0 62	0 66	0 71	0 76	0 81	0 86	0 91
3 00	0 58	0 63	0 69	0 75	0 80	0 85	0 92	0 98	1 03	1 10
3 50	0 68	0 74	0 80	0 87	0 93	0 99	1 07	1 14	1 20	1 27
4 00	0 78	0 84	0 92	1 00	1 06	1 14	1 22	1 30	1 37	1 46
4 50	0 87	0 95	1 03	1 12	1 19	1 28	1 37	1 46	1 54	1 64
5 00	0 97	1 05	1 15	1 25	1 33	1 42	1 53	1 63	1 72	1 82
5 50	1 07	1 15	1 26	1 37	1 46	1 56	1 68	1 79	1 89	2 00
6 00	1 17	1 26	1 38	1 50	1 60	1 71	1 83	1 95	2 06	2 19
6 50	1 26	1 37	1 50	1 62	1 73	1 85	1 98	2 11	2 23	2 37
7 00	1 36	1 48	1 62	1 74	1 87	2 00	2 14	2 28	2 41	2 55
7 50	1 46	1 58	1 73	1 86	2 00	2 14	2 29	2 44	2 58	2 73
8 00	1 56	1 69	1 85	1 99	2 14	2 28	2 44	2 60	2 75	2 92
8 50	1 65	1 80	1 96	2 11	2 27	2 42	2 59	2 76	2 92	3 10
9 00	1 75	1 90	2 08	2 24	2 41	2 57	2 75	2 93	3 08	3 28
9 50	1 85	2 00	2 19	2 36	2 54	2 71	2 90	3 09	3 25	3 46
10 00	1 95	2 11	2 31	2 49	2 68	2 85	3 06	3 25	3 42	3 65
10 50	2 04	2 22	2 42	2 61	2 81	2 99	3 21	3 41	3 59	3 83
11 00	2 14	2 33	2 54	2 74	2 94	3 15	3 36	3 58	3 77	4 01
11 50	2 24	2 43	2 65	2 86	3 07	3 29	3 51	3 74	3 94	4 19
12 00	2 34	2 54	2 77	2 99	3 21	3 43	3 67	3 90	4 12	4 38
12 50	2 43	2 64	2 88	3 11	3 35	3 58	3 82	4 06	4 29	4 58
13 00	2 53	2 75	3 00	3 24	3 48	3 72	3 97	4 23	4 47	4 74
13 50	2 62	2 86	3 11	3 36	3 61	3 87	4 12	4 39	4 64	4 92
14 00	2 72	2 97	3 23	3 48	3 75	4 01	4 28	4 56	4 82	5 10
14 50	2 82	3 07	3 34	3 60	3 88	4 15	4 43	4 72	4 99	5 28
15 00	2 92	3 18	3 46	3 73	4 02	4 29	4 58	4 88	5 16	5 47
15 50	3 01	3 28	3 57	3 85	4 15	4 43	4 73	5 04	5 33	5 65
16 00	3 11	3 39	3 69	3 98	4 29	4 58	4 89	5 21	5 51	5 83
16 50	3 21	3 49	3 80	4 10	4 42	4 72	5 04	5 37	5 68	6 01
17 00	3 31	3 60	3 92	4 23	4 55	4 87	5 19	5 53	5 85	6 20
17 50	3 40	3 71	4 03	4 35	4 68	5 01	5 34	5 69	6 02	6 38
18 00	3 50	3 82	4 15	4 48	4 82	5 16	5 50	5 86	6 20	6 56
18 50	3 60	3 92	4 26	4 60	4 95	5 30	[illegible] 65	6 02	6 37	6 74

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus pro ſingulis latitudinis gradibus, ſub parallelo 45° ſubſtituenda.

Correctio ſub parall. 45°	Gradus Latitudinis loci.									
	21	22	23	24	25	26	27	28	29	
Sec.	Sec.	Sec.	Sec.	Sec.	Sec	Sec	Sec.	Sec.	Sec.	Sec.
0 5	0 19	0 20	0 21	0 22	0 23	0 24	0 25	0 26	0 27	0 28
1 00	0 38	0 40	0 42	0 44	0 45	0 49	0 51	0 53	0 55	0 57
1 50	0 57	0 60	0 63	0 66	0 70	0 73	0 76	0 80	0 82	0 86
2 00	0 77	0 81	0 85	0 90	0 93	0 98	1 02	1 06	1 10	1 15
2 50	0 96	1 01	1 06	1 15	1 16	1 22	1 27	1 32	1 38	1 43
3 00	1 15	1 21	1 27	1 39	1 40	1 47	1 5[illegible]	1 59	1 66	1 72
3 50	1 34	1 41	1 48	1 55	1 63	1 71	1 7[illegible]	1 85	1 93	2 01
4 00	1 54	1 62	1 70	1 78	1 86	1 96	2 04	2 12	2 21	2 30
4 50	1 73	1 82	1 91	2 00	2 09	2 20	2 29	2 38	2 49	2 59
5 00	1 92	2 02	2 12	2 22	2 33	2 45	2 55	2 65	2 77	2 88
5 50	2 11	2 22	2 33	2 44	2 56	2 69	2 80	2 91	3 04	3 17
6 00	2 31	2 43	2 55	2 67	2 79	2 94	3 06	3 18	3 32	3 46
6 50	2 50	2 63	2 76	2 89	3 02	[illegible] 18	3 21	3 45	3 60	3 75
7 00	2 69	2 83	2 97	3 11	3 26	3 42	3 57	3 72	3 88	4 04
7 50	2 88	3 03	3 18	3 33	3 49	3 66	3 82	3 99	4 15	4 32
8 00	3 08	3 24	3 40	3 56	3 72	3 91	4 08	4 25	4 43	4 61
8 50	3 27	3 44	3 61	3 78	3 95	4 15	4 33	4 52	4 71	4 90
9 00	3 46	3 64	3 82	4 00	4 19	4 40	4 59	4 78	4 99	5 19
9 50	3 65	3 84	4 03	4 22	4 42	4 64	4 84	5 04	5 26	5 48
10 00	3 85	4 05	4 25	4 45	4 65	4 89	5 10	5 31	5 54	5 77
10 50	4 04	4 25	4 46	4 67	4 88	5 13	5 35	5 57	5 84	6 05
11 00	4 23	4 45	4 67	4 89	5 12	5 38	5 61	5 84	6 10	6 34
11 50	4 42	4 65	4 88	5 11	5 35	5 62	5 86	5 10	6 37	6 63
12 00	4 62	4 85	5 10	5 33	5 58	5 87	6 1[illegible]	6 37	6 65	6 92
12 50	4 81	5 05	5 31	5 55	5 81	6 11	6 37	6 63	6 93	7 2[illegible]
13 00	5 00	5 26	5 52	5 78	6 05	6 36	6 63	6 90	7 20	7 5[illegible]
13 50	5 19	5 46	5 73	6 00	6 28	6 60	6 88	7 17	7 48	7 7[illegible]
14 00	5 38	5 66	5 94	6 23	6 52	6 84	7 14	7 44	7 76	8 0[illegible]
14 50	5 57	5 86	6 15	6 45	6 75	7 08	7 39	7 70	8 03	8 3[illegible]
15 00	5 77	6 06	6 37	6 67	6 98	7 33	7 66	7 97	8 31	8 6[illegible]
15 50	5 96	6 26	6 58	6 89	7 21	7 57	7 90	8 23	8 59	8 9[illegible]
16 00	6 15	6 47	6 79	7 12	7 45	7 82	8 16	8 50	9 87	9 2[illegible]
16 50	6 34	6 67	7 00	7 34	7 68	8 06	8 41	8 76	9 14	9 5[illegible]
17 00	6 53	6 87	7 22	7 56	7 91	8 31	8 67	9 03	9 42	9 8[illegible]
17 50	6 72	7 07	7 43	7 78	8 14	8 56	8 92	9 29	9 69	101[illegible]
18 00	6 91	7 28	7 64	8 01	8 38	8 79	9 18	9 56	9 9[illegible]	1039
18 50	7 10	7 49	7 85	8 23	8 61	9 03	9 44	9 82	1025	105[illegible]

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correspondentibus pro singulis latitudinis gradibus correctioni sub parallelo 45°. substituenda.

Correctio sub parall. 45°	Gradus Latitudinis loci.									
	31	32	33	34	35	36	37	38	39	40
Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 30	0 31	0 32	0 33	0 35	0 36	0 37	0 39	0 40	0 42
1 00	0 60	0 63	0 66	0 67	0 70	0 73	0 75	0 78	0 81	0 84
1 50	0 90	0 94	0 97	1 01	1 05	1 09	1 13	1 17	1 21	1 26
2 00	1 20	1 25	1 30	1 35	1 40	1 45	1 51	1 56	1 62	1 68
2 50	1 50	1 56	1 62	1 69	1 75	1 81	1 88	1 95	2 02	2 10
3 00	1 80	1 88	1 95	2 02	2 10	2 18	2 26	2 34	2 43	2 52
3 50	2 10	2 19	2 27	2 36	2 45	2 54	2 63	2 73	2 83	2 94
4 00	2 40	2 51	2 60	2 69	2 80	2 90	3 01	3 12	3 24	3 36
4 50	2 70	2 82	2 92	3 03	3 15	3 26	3 38	3 51	3 6[illegible]	3 78
5 00	3 00	3 13	3 25	3 36	3 50	3 63	3 76	3 90	4 05	4 20
5 50	3 30	3 44	3 57	3 70	3 85	3 99	4 13	4 29	4 45	4 62
6 00	3 60	3 76	3 90	4 04	4 20	4 35	4 51	4 68	4 86	5 04
6 50	3 90	4 07	4 22	4 38	4 55	4 71	4 89	5 07	5 26	5 46
7 00	4 20	4 38	4 55	4 72	4 90	5 08	5 27	5 47	5 67	5 87
7 50	4 50	4 69	4 87	5 06	5 25	5 44	5 64	5 86	6 07	6 29
8 00	4 80	5 01	5 20	5 39	5 60	5 80	6 02	6 25	6 58	6 71
8 50	5 10	5 32	5 52	5 73	5 95	6 16	6 40	6 64	6 88	7 13
9 00	5 40	5 63	5 85	6 07	6 30	6 53	6 78	7 03	7 29	7 55
9 50	5 70	5 94	6 17	6 40	6 65	6 89	7 15	7 42	7 69	7 97
10 00	6 00	6 26	6 50	6 75	7 00	7 25	7 53	7 81	8 10	8 39
10 50	6 30	6 57	6 82	7 09	7 35	7 61	7 90	8 20	8 50	8 81
11 00	6 60	6 88	7 15	7 42	7 70	7 98	8 28	8 59	8 91	9 23
11 50	6 90	7 19	7 47	7 76	8 05	8 34	8 66	8 98	9 31	9 65
12 00	7 20	7 51	7 80	8 10	8 40	8 71	9 04	9 37	9 72	10 7
12 50	7 50	7 82	8 12	8 44	8 75	9 07	9 41	9 76	10 12	10 49
13 00	7 80	8 13	8 45	8 75	9 10	9 44	9 79	10 15	10 53	10 91
13 50	8 10	8 44	8 77	9 11	9 45	9 80	10 16	10 54	10 93	11 33
14 00	8 40	8 75	9 12	9 44	9 80	10 17	10 54	10 92	11 34	11 74
14 50	8 70	9 07	9 45	9 78	10 10	10 53	10 92	11 33	11 74	12 16
15 00	9 00	9 39	9 75	10 12	10 50	10 89	11 30	11 72	12 15	12 58
15 50	9 30	9 70	10 07	10 46	10 85	11 25	11 67	12 11	12 55	13 00
16 00	9 60	10 01	10 40	10 80	11 20	11 62	12 05	12 50	12 96	13 42
16 50	9 90	10 32	10 72	11 13	11 55	11 98	12 42	12 89	13 36	13 84
17 00	10 20	10 64	11 05	11 37	11 90	12 34	12 80	13 28	13 77	14 26
17 50	10 50	10 95	11 37	11 80	12 25	12 70	13 18	13 67	14 17	14 68
18 00	10 80	11 26	11 70	12 15	12 60	13 07	13 56	14 05	14 58	15 10
18 50	11 10	11 57	12 02	12 48	12 95	13 43	13 93	14 46	14 98	15 52

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TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correspondentibus pro singulis latitudinis gradibus, correctioni sub parallelo 45° substituenda.

Correctio sub parallelo 45°	Gradus Latitudinis loci.									
45°	41	42	43	44	45	46	47	48	49	50
Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 43	0 45	0 46	0 48	0 50	0 52	0 53	0 55	0 57	0 59
1 00	0 87	0 90	0 93	0 97	1 00	1 04	1 07	1 11	[illegible]	[illegible]
1 50	1 30	1 35	1 40	1 45	1 50	1 55	1 61	1 66	1 72	1 78
2 00	1 74	1 80	1 87	1 93	2 00	2 07	2 15	2 22	2 30	2 38
2 50	2 17	2 25	2 33	2 41	2 50	2 59	2 67	2 77	2 87	2 97
3 00	2 61	2 70	2 80	2 90	3 00	3 11	3 22	3 33	3 45	3 57
3 50	[illegible]	[illegible]	3 26	3 38	3 50	3 62	3 75	3 88	4 02	[illegible]
4 00	3 48	3 60	3 73	3 86	4 00	4 14	4 29	4 44	4 69	4 7
4 50	3 81	4 05	4 20	4 34	4 50	4 65	4 73	4 99	5 17	5 3
5 00	4 35	4 50	4 67	4 83	5 00	5 17	5 37	5 55	5 75	5 9
5 50	4 78	4 95	[illegible]	5 31	5 50	5 69	5 90	6 10	6 32	[illegible]
6 00	5 22	5 40	5 60	5 79	6 00	6 21	6 44	6 66	6 90	7 1
6 50	5 66	5 85	6 06	6 27	6 50	6 73	6 97	7 21	7 47	[illegible]
7 00	6 08	6 30	6 53	6 76	7 00	7 25	7 51	7 77	8 05	8 3
7 50	6 51	6 75	7 00	7 24	7 50	7 76	8 04	8 32	8 62	8 9
8 00	6 95	7 20	7 47	7 72	8 00	8 28	8 58	8 88	9 20	9 5
8 50	7 38	7 65	7 93	8 20	8 50	8 80	9 12	9 43	9 77	10 1
9 00	7 82	8 10	8 40	8 69	9 00	9 32	9 66	9 99	10 35	10 7
9 50	8 25	8 55	8 87	9 17	9 50	9 83	10 19	10 54	10 92	11 3
10 00	8 69	9 00	9 34	9 65	10 00	10 35	10 73	11 10	11 50	11 9
10 50	9 13	9 45	9 80	10 13	10 50	10 87	11 26	11 65	12 08	12 5
11 00	9 56	9 90	10 27	10 62	11 00	11 39	11 80	12 21	12 65	13 1
11 50	9 99	10 35	10 73	11 10	11 50	11 91	12 34	12 76	13 23	13 7
12 00	10 43	10 80	11 20	11 58	12 00	12 43	12 88	13 32	13 80	14 3
12 50	10 86	11 25	11 66	12 06	12 50	12 94	13 41	13 87	14 37	14 8
13 00	11 30	11 70	12 13	12 55	13 00	13 46	13 95	14 43	14 95	15 4
13 50	11 73	12 15	12 59	13 03	13 50	13 98	14 48	14 98	15 52	16 0
14 00	12 16	12 60	13 06	13 52	14 00	14 50	15 02	15 54	16 10	16 6
14 50	12 59	13 05	13 53	14 00	14 50	15 01	15 55	16 09	16 67	17 2
15 00	13 93	13 50	14 00	14 48	15 00	15 53	16 09	16 65	17 25	17 8
15 50	13 46	13 95	14 46	14 96	15 50	16 05	16 62	17 20	17 82	18 4
16 00	13 90	14 40	14 93	15 45	16 00	16 57	17 16	17 76	18 40	19 9
16 50	14 33	14 85	15 39	15 93	16 50	17 08	17 69	18 31	18 97	19
17 00	14 77	15 30	15 86	16 41	17 00	17 60	18 23	18 87	19 55	20
17 50	15 20	15 75	16 32	16 89	17 50	18 14	18 76	19 42	20 12	20 8
18 00	15 64	16 20	16 79	17 38	18 00	18 66	19 30	19 98	20 70	21 4
18 50	16 07	16 65	17 25	17 86	18 50	19 18	19 83	20 53	21 27	22 5

TABULA XV.

Correctio horæ meridianæ prodeuntis ex altitudinibus correſpondentibus pro ſingulis latitudinis gradibus, correctioni ſub parallelo 45° ſubſtituenda.

Correctio ſub parall. 45°	Gradus latitudinis loci.									
	51	52	53	54	55	56	57	58	59	60
Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.	Sec.
0 50	0 61	0 64	0 66	0 69	0 71	0 75	0 77	0 80	0 82	0 86
1 00	1 23	1 28	1 33	1 37	1 43	1 48	1 54	1 60	1 66	1 73
1 50	1 85	1 92	1 99	2 07	2 14	2 22	2 31	2 40	2 49	2 59
2 00	2 47	2 56	2 66	2 75	2 86	2 96	3 08	3 20	3 33	3 46
2 50	3 08	3 20	3 32	3 44	3 57	3 70	3 85	4 00	4 16	4 32
3 00	3 70	3 84	3 98	4 13	4 30	4 44	4 62	4 80	4 99	5 19
3 50	4 32	4 48	4 64	4 80	5 02	5 18	5 39	5 60	5 82	6 06
4 00	4 94	5 12	5 31	5 50	5 72	5 92	6 16	6 40	6 66	6 92
4 50	5 55	5 76	5 97	6 19	6 43	6 66	6 93	7 20	7 49	7 79
5 00	6 17	6 40	6 64	6 88	7 15	7 40	7 70	8 00	8 32	8 65
5 50	6 79	7 04	7 30	7 56	7 86	8 14	8 47	8 80	9 15	9 52
6 00	7 41	7 88	7 96	8 25	8 58	8 88	9 24	9 [illegible]	10 [illegible]	10 [illegible]
6 50	8 02	8 32	8 62	8 94	9 29	9 62	10 01	10 40	10 8[illegible]	11 25
7 00	8 64	8 96	9 29	9 63	10 00	10 37	10 78	11 20	11 65	12 [illegible]
7 50	9 26	9 60	9 95	10 3[illegible]	10 71	11 11	11 55	12 00	12 48	12 [illegible]
8 00	9 88	10 24	10 62	11 00	11 43	11 85	12 32	12 80	13 31	13 [illegible]
8 50	10 49	10 88	11 28	11 69	12 14	12 59	13 09	13 60	14 14	14 [illegible]
9 00	11 11	11 52	11 93	12 38	12 86	13 33	13 86	14 40	14 98	15 58
9 50	11 73	12 16	12 60	13 07	13 57	14 07	14 63	15 20	15 81	16 4[illegible]
10 00	12 36	12 80	13 27	13 75	14 29	14 81	15 40	16 00	16 64	17 31
10 50	12 98	13 44	13 93	14 45	14 90	15 56	16 17	16 80	17 47	18 18
11 00	13 58	14 08	14 60	15 13	15 72	16 29	16 94	17 60	18 31	19 94
11 50	14 20	14 72	15 26	15 82	16 43	17 03	17 71	18 40	19 14	19 90
12 00	14 81	15 36	15 93	16 51	17 15	17 77	18 48	19 20	19 97	20 76
12 50	15 43	16 00	16 58	17 20	17 86	18 51	19 25	20 00	20 80	21 63
13 00	16 05	16 64	17 25	17 88	18 58	19 26	20 02	20 80	21 64	22 50
13 50	16 67	17 28	17 91	18 57	19 29	20 00	20 79	21 60	22 47	23 37
14 00	17 29	17 92	18 58	19 26	20 00	20 75	21 56	22 40	23 30	24 24
14 50	17 90	18 56	19 24	19 94	20 71	21 49	22 33	23 20	24 13	25 10
15 00	18 52	19 20	19 90	20 63	21 43	22 23	23 10	24 00	24 97	25 97
15 50	19 14	19 84	20 56	21 32	22 14	22 97	23 87	24 80	25 80	26 93
16 00	19 76	20 48	21 23	22 01	22 86	23 71	24 64	25 60	26 63	27 70
16 50	20 37	21 12	21 89	22 70	23 57	24 45	25 41	26 40	27 46	28 50
17 00	20 99	21 76	22 56	23 39	24 29	25 19	26 18	27 20	28 30	29 43
17 50	21 61	22 40	23 22	24 08	25 00	25 93	26 95	28 00	29 13	30 [illegible]
18 00	22 23	23 04	23 88	24 77	25 72	26 68	27 72	28 80	29 96	31 [illegible]
18 50	22 85	23 68	24 54	25 45	26 43	27 42	28 49	29 60	30 79	32 [illegible]

TABULA XVI.

Correctio horæ meridianæ prodeuntis ex altitudinibus correspondentibus Solis pro Elevatione Poli Vindobonensi grad. 48. m. 12. s 36.

Intervallum horarium a meridie ad tempus observationis.

Locus Solis verus in Zodiaco		1h.40m S.	2h.0.m S.	2h.20m S.	2h.40m S.	3h.0.m S.	3h.20m S.	3h.40m S.	4h.0.m S.
♈	0	17.38	17.66	17.98	18.34	18.73	19.21	19.76	20.40
	10	16.11	16.42	16.77	17.14	17.60	18.12	18.73	19.41
	20	14.40	14.80	15.20	15.57	16.04	16.59	17.23	17.96
♉	0	12.61	12.93	13.31	13.71	14.18	14.74	15.38	16.11
	10	10.56	10.87	11.26	11.62	12.08	12.61	13.24	13.94
	20	8.62	8.72	9.06	9.40	9.82	10.30	10.86	11.48
♊	0	6.28	6.53	6.80	7.08	7.42	7.82	8.28	8.80
	10	4.17	4.33	4.52	4.72	4.97	5.27	5.59	5 95
	20	2.05	2.15	2.26	2.36	2.49	2.63	2.80	3.01
♋	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	2.05	2.15	2.26	2.36	2.49	2.63	2.80	3.01
	20	4.15	4.31	4.51	4.71	4.96	5.25	5.57	5.94
♌	0	6.24	6.49	6.78	7.04	7.38	7.79	8.25	8.77
	10	8.38	8.65	9.00	9.31	9.73	10.21	10.77	11.39
	20	10.49	10.84	11.16	11.53	11.99	12.52	13.14	13.80
♍	0	12.49	12.81	13.19	13.58	14.05	14.60	15.24	15.97
	10	14.25	14.65	15.03	15 40	15.87	16.41	17.06	17.77
	20	15.94	16.25	16.61	16.97	17.41	17.94	18.53	19.22
♎	0	17.20	17.49	17.83	18.14	18.55	19.02	19.57	20.20
	10	18.04	18.30	18.58	18.86	19.22	19.63	20.12	20.67
	20	18.35	18.57	18.83	19.06	19.36	19.71	20.12	20.53
♏	0	18.02	18.19	18.41	18.58	18.82	19.10	19.44	19.81
	10	16.94	17.08	17.25	17.37	17.55	17.78	18.01	18.31
	20	15.04	15.14	15.24	15.37	15.48	15.64	15.82	16.03
♐	0	1[illegible].30	12.35	12.44	12.49	12.58	12.67	12.80	12.94
	10	8.72	8.76	8.80	8.84	8.88	8.95	9.02	9 09
	20	4.53	4.55	4.58	4.60	4.62	4.64	4.68	4.71
♑	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	10	4.55	4.56	4.58	4.60	4.62	4.65	4.68	4.71
	20	8.74	8.81	8.84	8.88	8.93	9.00	9.06	9.13
♒	0	12.26	12.43	12.49	12.59	12.64	12.73	12.86	13.01
	10	15.15	15.24	15.35	15.45	15.57	15.77	15.91	16.13
	20	17.08	17.22	17.39	17.48	17.69	17.90	18.15	18.44
♓	0	18.17	18.35	18.57	18.76	18.98	19.25	19.60	19.98
	10	18.49	18.72	19.00	19.24	19.53	19.89	20.29	20.76
	20	18.17	18.43	18.73	19.00	19.35	19.78	20.26	20.83
♈	0	17.38	17.66	17 98	18.34	18.73	19.21	19.76	20.40

Locus Solis verus in Zodiaco.

Subtrahe. (♈ 0 – ♋ 0)

Adde. (♋ 0 – ♑ 0)

Subtrahe. (♑ 0 – ♈ 0)

NB. Locum Solis ad semigradum novisse sufficit.

Correctio hujus Tabulæ composita est ex correctione Tabulæ XIII. hinc hora meridiei, æquatione Tabulæ XIII. non eget.

TABULA XVII.

Differentiæ Meridianorum in tempore, & in partibus Æquatoris inter OBSERVATORIUM CÆSAREO-REGIUM Universitatis Viennensis in Austria, & inter loca præcipua Telluris, cum eorumdem locorum Latitudine, seu Elevatione Poli.

LOCORUM NOMINA.	Differentiæ Meridianorum. In Tempore	Differentiæ Meridianorum. In parti. Æquat.	Latitudo, seu Elevatio Poli.
	H. M. S.	G. M. S.	G. M. S.
Abbatis-villa, *Abbeville*. Galliæ.	0.*58.11. Oc.	14.32.50.	50.* 7. 1. S
Agra Mogolis, seu Indiæ interior.	4.* 1.26. Or.	60.21.30.	27.† 0. 0.
Agria, Erlau, Hungariæ. Obs..	0.*16. 0. Or.	4. 0. 0.	47.*53.54.
AlbaCarolina, Carlsburg, Transylv	0. 28.47. Or.	7.11.45.	46. 4.21.
Alba-Regalis, Stuhlweissenb. Hung.	0. 9. 0. Or.	2.15. 0.	47.*19.15.
Alenconium, *Alençon*, Normand.	1. 5.10. Oc.	16.17.30.	48. 25. 0.
Alepum, Syriæ.	1. 23.50. Or.	20.57.30.	35†45.23.
Alexandria, Ægypti.	0.*55.16. Or.	13.49. 0.	31.*11.28.
Algeria, Barbar.	0. 56.39. Oc.	14. 9.45.	36. 49.30.
Ambianum, *Amiens*, Gall.	0.*56.18. Oc.	14. 4.30.	49 *53.38.
Amstelodamum, Amsterdam, Holl.	0. 46.34. Oc	11.38.30.	52.*21.56.
Ancona, Italiæ.	0. 11.28. Oc.	2.52. 0.	43. 37.54.
Antipolis, *Antibe*, Gall.	0.*36.56. Oc.	9.13.57.	43.*34.50
Antverpia, Antwerpen, Belgii.	0.*47.55. Oc.	11.58.48.	51.*13.15.
Aquæ sextiæ, *Aix*, in Provinc.	0.*43.44. Oc.	10.55.56.	43.*31.35.
Arelatum, *Arles*, Gall.	0.*47. 1. Oc.	11.45. 6.	43.*40.33.
Argentoratum, Straßburg, Germ.	0.*34.25. Oc.	8.36.15	48.*34.35.
Atrebatum, *Arras*, Gallo-belgii,	0.*54.25. O[illegible].	13.36.18.	50.*17.30.
Athenæ, Græciæ.	0. 30. 0. Or.	7.30. 0.	38. 5. 0.
Augusta Vind. Augspurg, Germ.	0. 22. 0. Oc.	5.30. 0.	48. 23.35.
Aurelianum, *Orleans*, Gall.	0.*57.53. Oc.	14.28.15.	47.*54. 4.
Barcino, *Barcellona*, Hispaniæ.	0. 56.35. Oc.	14. 8.45.	41.*22.52.
Basilea, *Basel*, Helvetiæ	0. 35.26 Oc.	8.51.30.	47. 36. 0.
Belfonte, Schönbrunn, Austriæ.	0. 0.14. Oc.	0. 3.30.	48. 12. 0.
Belgradum, Belgrad, Serviæ	0. 16.22. Or.	4. 5.30.	44. 50. 0.
Berolinum, Berlin, Germ. Obs.	0 *12. 0. Oc.	3. 0. 0.	52.*31.46.
Bononia, *Bologna*, Italiæ. Obs.	0.*20. 5. Oc.	5. 1.15.	44 *29.52.
Brestia, *Brest*, Gall.	1.*23.33. Oc.	20.53.20.	48.*22.55
Bruxellæ, Brüssel, Belgii.	0.*48. 3. Oc.	12. 0.47.	50.*51. 0.
Buda, Ofen, Hung. Obs.	0.* 10.39. Or.	2.39.45.	47.*29.44.

LOCORUM NOMINA.	Differentia Meridianorum. In Tempore. H. M. S.	In partib. Æquat. G. M. S.	Latitudo seu Elevatio Poli. G. M. S.
Buenos-aires, Americæ.	4.*59.35. Oc.	74.53.45.	34. 35.26. M
Burdegala, *Bourdeaux*, Gall.	1.* 7.49. Oc.	16.57.19.	44. 50.18. S
Cadix, Hiſpaniæ. Obſ.	1.*30.41. Oc.	22.40.15.	36.†32. 1.
Cadomum, *Caen*, Gall.	1.* 6.57. Oc.	16.44.17.	49. 11.10.
Cairus, *Cairo*, Ægypti.	1.* 0.30. Or.	15. 7.30.	30.* 3.12.
Caletum, *Calais*, Gall.	0.*58. 6. Oc.	14.31.34.	50.*57.31.
Candia, Græciæ.	0.*35.42. Or.	8.55.30.	35.*18.45.
Canton, Chinæ.	6.*26.43. Or.	96.40.45.	23.* 8. 9.
Caput bonæ ſpei, *Africæ*.	0.* 8. 5. Or.	2. 1.15.	33. 55.15. M
Caput Viride.	2.*15.33. Oc.	33.53.15.	14.*43.45. S
arthagena, Americæ.	6.* 7.15. Oc.	91.48.30.	10.*26.35.
Caſſovia, Caſchau, Hungariæ.	0. 19.35. Or.	4.53.49.	48. 43.21.
Caſſellæ, Caſſel, Germ.	0. 27.45. Oc.	6.56.15.	51. 19.16.
Cayena, Americæ.	4.*34.30. Oc.	68.37.30.	4.*56.15.
Cibinium, Hermanſtadt, Tranſylv.	0. 34.44. Or.	8.41. 0.	46. 12. 0.
Clagenfurtum, Clagenfurt, Carint.	0. 9.26. Oc.	2.21.30.	46. 42. 0.
Claudiopolis, Clauſenburg, Tranſ.	0. 29.44. Or.	7.26. 0.	46. 53 0.
Clivia, Cleve, Germ.	0. 40.45. Oc.	10.11.15.	51. 45.45.
Colonia, Cölln, Germ.	0. 37.56. Oc.	9.29. 0.	50. 55.21.
Conſtantinopolis, Turciæ.	0.*50.15. Or.	12.33.45.	41.* 1.10.
Cracovia, Cracau, Galic. obſ.	0.* 14.12. Or.	3.33. 0.	50.* 3.50.
Cremifanum, Cremsmünſter. Obſ.	0.* 8.59. Oc.	2.14.45.	48.* 3.29.
Dieppa, *Dieppe*, Gall.	1.* 1.13. Oc.	15.18.18.	49.*55 27.
Dillinga, Dillingen, Sueviæ.	0. 23.27. Oc.	5.51.45.	48. 34.28.
Divio, *Dyon*, Gall.	0.*45.20. Oc.	11.20. 7.	47.*19.22.
Dresda, Dresden, Germ.	0. 10.45. Oc.	2.41.15.	51. 2.54.
Dublinum, *Dublin*, Hiberniæ.	1.†30.43. Oc.	22.40.45.	53. 21.10.
Dunquerca, Dunkirchen, Belgii.	0.*56. 0. Oc.	14. 0. 7.	51.* 3.10.
Edimburgum, Edimburg, Scotiæ.	1. 18.21. Oc.	19.35.15.	55. 58. 0.
Erfordia, Erfurth, Germ.	0. 21. 1. Oc.	5.15.15.	50. 59. 8.
Ferraria, *Ferrara*, Italiæ.	0.*19. 5. Oc.	4.46.15.	44.*54. 0.
Ferri, Inſula.	2.*15.45. Oc.	33.56.15.	27.*47.20.
Flexia, *Fleche*, Gall.	1.* 6. 2. Oc.	16.30.30.	47.*42. 0.
Florentia, Florenz, Italiæ.	0.*20.28. Oc.	5. 7. 0.	43.*46.30.

LOCORUM NOMINA.	Differentia Meridianorum. In Tempore.	In partib. Æquat.	Latitudo, seu Elevatio Poli
	H. M. S.	G. M. S.	G. M. S.
Francofurtum ad Mœnum.	0. 31.10.Oc.	7.47.30.	50. 7.40. S
Francofurtum ad Viadrum.	0. 7. 0.Oc.	1.48. 0.	52. 22. 0.
Gedanum, Dantzig Prussiæ.	0.* 9. 2.Or.	2.15.30.	54.†21. 5.
Geneva, Genf, Helvetiæ.	0.*40.50.Oc.	10.12.30.	46.†12.17.
Goa, Indiæ.	3.*49.30.Or.	57.22.30.	15.* 31. 0.
Gotha Saxoniæ Obs.	0.*22.36.Oc.	5.39. 0.	50.* 56.17.
Gœttinga, Göttingen, Germ.	0. 25*50.Oc.	6.27.30.	51.*31.54
Gratianopolis, Grenoble, Gall.	0.*42.35.Oc.	10.38.50.	45.*11.49
Græcium, Grätz, Styriæ. Obs.	0. 3.42.Oc.	0.55.37.	47.* 4. 9
Grenovicum, Greenw. Angl. Obs.	1.* 5.31.Oc.	16.22.45.	51.*28.39
Hafnia, Coppenhag. Daniæ Obs.	0.*15. 8.Oc.	3.47. 0.	55.*41. 4
Hala Magdeburg, Halle, Saxon.	0. 16.42.Oc.	4.10.30.	51. 29. 24.
S. Helenæ Insula.	1.*28.46.Oc.	22.11.30.	16.* 0. 0. M
Jena, Germ.	0. 19.10.Oc.	4.47.30.	50. 57. 0. S
Jerosolyma, Jerusalem, Palestinæ	1. 15.50.Or.	18.57.30.	31. 50. 0.
Ingolstadium, Ingolst., Germ. Obs.	0.*19.51.Oc.	4.57.43.	48.*45.54.
Kebecum Canadæ.	5.*45. 2.Oc.	86.15.30.	46.*55. 0.
Labacum, Laybach, Germ.	0. 7.34.Oc.	1.53.30.	46. 2. 0.
Leopolis Lemberg, Galliciæ.	0. 31. 5.Or.	7.46.15.	49. 51.42.
Lima, Peruviæ.	6.*12.48.Oc.	93.12. 0.	12.* 1.15. M
Lincium, Lintz, Austriæ.	0. 8.24.Oc.	2. 6. 0.	48. 18.46. S
Londinum, London, Angliæ.	1.* 5.57.Oc.	16.29.15.	51.*31. 0.
Lugdunum Batavor. Leyden, Obs.	0. 47.45.Oc.	11.56.15.	52. 8.40.
Lugdunum Galliæ, Lion.	0.*46.11.Oc.	11.32.47.	45.*45.50.
Lutetia Parisiorum, Paris, Gall.	0.*56.10.Oc.	14. 2.30.	48.*50.12.
Macaum, Macao, Chinæ.	6.*29.35.Or.	97.23.45.	22.*12.44.
Madritum, Madrit, Hisp. Obs.	1.*20.19.Oc	20. 4.45.	40.*25.18.
Malaca, Indiæ.	5.†42.50.Or.	85.42.30.	2.†12. 0.
Manheim, Palat. Obs.	0. 31.40.Oc.	7.55. 0.	49. 29.16.
Mantua, Italiæ.	0. 21.54.Oc.	5.28.30.	45. 7. 0.
Martinica Ins. Americæ.	5. 9.25.Oc.	77.21.15.	14. 43. 9.
Massilia, *Marseille*, Gall.	0.*44. 1.Oc.	11. 0.22.	43.*17.45.
Mediolanum, Mayland, Italiæ.	0.*28.49.Oc.	7.12.15.	45. 28.10.
Melita, *Malta*, Ins.	0.* 7.36.Oc.	1.54. 0.	35.*53.47.
Messana, Siciliæ.	0. 2.22.Oc.	0.35.30.	38. 11.10.
Metæ, Metz, Lotharingiæ.	0.*40.46.Oc.	10.11.30.	49.* 7. 5.

LOCORUM NOMINA.	Differentia Meridianorum. In Tempore.	In partib. Æquat.	Latitudo, seu Elevatio Poli.
	H. M. S.	G. M. S.	G. M. S.
Mexicum, *Mexico*, Americæ.	7.†45.56. Oc.	116.28.15	19. 25.50. S
Mietavia *Mietau*, Curland. Obſ.	0.*29.24. Or.	7.21. 0.	56. 39. 6:
Moguntia, Mainz, Germ.	0. 32.50. Oc.	8.12.30.	49.*59. 0.
Monachium, München Bavariæ.	0. 19.10. Oc.	4.47.30.	48. 9.55.
Mons Peſſulanus, Montpellier, Gal.	0.*49.59. Oc.	12.29.46.	43. 36.33.
Moſcua Urbs, Moſcau Moſcoviæ.	1.*25.35. Or.	21.23.45.	55.*45.20.
Muſſipontum Lotharingiæ.	0. 41.22.Oc.	10.20.30.	48. 54.19.
Mutina, Modena, Italiæ.	0.†20.40.Oc.	5.10. 0.	44. 34. 0.
Nancy, Lotharingiæ.	0.*40.44. Oc.	10.10.57.	48. 41.28.
Nanking, Chinæ.	6. 49.38. Or.	102.24.30	32. 4.40.
Nanetes, *Nantes*, Galliæ.	1. 11.45. Oc.	17.56.18.	47.*13. 7.
Narbo, *Narbone*, Galliæ.	0.*53.29. Oc.	13.22.21.	43.*11.13.
Neapolis, *Napoli*, Italiæ.	0. 8 31. Oc.	2. 7.45.	40.*50.15.
Neoſtadium, Neuſtadt, Auſtriæ	0. 0.32. Oc.	0. 8. 0.	47. 48.27.
Nicæa, Nizza, in Pedemont.	0.*36.21. Oc.	9. 5. 8.	43.*41.54.
Norimberga, Nürnberg, Germ.	0.*21.14. Oc.	5.18.30.	49.†26.55.
Novus portus, Neuport, Gall.	0.*54.30.Oc.	13.37.35.	51.* 7.41.
Oenipont Innsbruck Tirol. Obſ.	0. 20. 0.Oc.	5. 0. 0.	47* 16. 8.
Olinda, Braſiliæ.	3. 25.52.Oc.	51.28. 0.	8. 13. 0.M
Olomucium, Olmütz, Moraviæ.	0. 3. 6.Or.	0 46.30.	49. 32. 0. S.
Oſtenda, Oſtende, Flandriæ.	0.*53.57. Oc.	13.29.17.	51.*13.55.
Oxfordia Angl. Obſ.	1. 10.26.Oc.	17.36.30.	51. 44.57.
Panormum Sicil. Obſ.	0.*12. 3.Oc.	3. 0.45.	38.* 6.45½.
Parma, Italiæ.	0. 23.44.Oc.	5.56. 0.	44. 44.50.
Paſſavium, Paſſau, Auſtriæ.	0. 12. 6.Oc	3. 1.30.	48 32. 0.
Patavium, Padua, Italiæ.	0.*18. 1.Oc.	4.30.15.	45 23.40.
Pekinum, Chinæ. Obſ.	6.*40 13,Or.	100.3.15.	39 54.25.
Peſtinum, Peſt, Hung.	0. 10.43.Or.	2.40.45.	47 30. 0.
Petropolis, Petersb. Ruſſiæ.Obſ.	0.*55 42.Or,	13.55 30.	59*56.23.
Picus Accipitrum, *Pic d'Azores*	2. 59 25.Oc.	44.51.15.	38. 35. 0.
Picus Teneriffæ.	2. 12.10.Oc.	33. 2.30.	28. 17. 0.
piſæ Ital. Obſ.	0. 24. 2.Oc.	6. 0.80.	43* 43. 7.
pollinga, Bavariæ.	0.†21. 1.Oc.	5.18. 8.	47. 48. 8.
Pondichery, Indiæ.	4. 13.56.Or.	63.29. 0.	11. 55.47.
Praga, Prag, Bohemiæ. Obſ.	0. 7.50.Oc.	1.57.30	50.* 5.19.
Poſonium, Presburg, Hung.	0. 2.54.Or.	0.43.30.	48. 8.28.
Quito, Peruviæ.	6.*17.10 Oc.	94.17.30.	0. 13.10.M.
Ratisbona, Regensburg, Germ.	0. 17.30.Oc.	4.22.30.	49. 2. 0.S.
Rodriges Insula. Indiæ	3.* 7.16.Or	46.49. 0.	19. 40.40.M

LOCORUM NOMINA.	Differentia Meridianorum		Latitudo, ſeu Elevatio Poli.
	In Tempore.	In partib. Æquat.	
	H. M S.	G. M. S.	G. M. S.
Roma, Rom, Italiæ.	o.* 15.45. Oc.	3.56.30.	41.*53.54.S.
Roſtochium, Roſtock, Germ.	o.†15. 2. Oc.	3.45.30.	54.†10. o.
Roterodamum, Hollandiæ.	o.†47.33. Oc.	11.53.15.	51.†55.50.
Salisbu:gum, Salzburg, Bavar.	o. 13.34. Oc.	3.23 30.	47. 48. 2.
Senæ, *Sens*, Galliæ.	o.*52.22. Oc.	13. 5.52.	48. 11.56.
Siam, Indiæ.	5.*37.50. Or.	84.27.30.	14. 18. o.
Sagan, Sileſiæ.	o.* 4. 1. Oc.	1. 0.15.	51.*42.12.
Smirna, Natoliæ,	o. 43.49. Or.	10.57.15.	38.*28. 7.
Stokholmia, Stockholm, Sueciæ.	o.* 6.41. Or.	1.40.15.	59.*20 30.
Surate, Indiæ.	3. 43.50. Or.	55.57 30.	21.†10. o.
Schwezinga, Schwezingen, Germ.	o.*31.16. Oc.	7.49. 0	49.*23. 4.
Taurinum, Turin, Italiæ.	o. 34.50. Oc.	8.42.30.	45.* .4.14.
Telo-Martius, Toulon, Galliæ.	o.*41.44. Oc.	10 25.55.	43.* 7.24.
Temeſia, Temeswar, Hungariæ.	o. 18.37. Or.	4 39.10.	45. 49.45.
Theſſalonica, Græciæ.	o. 27. 2. Or.	6.45.30.	40. 41.10.
Tergeſtum, Trieſt, Italiæ.	o. 10. 6. Oc.	2.31.30.	45. 43. o.
Tigurum, Zürch, Helvetiæ.	o.†31.21. Oc.	7 50.15.	47.†22. o.
Tobolsk, Siberiæ.	3.*28.10. Or.	52. 2 30.	58.*12.30.
Tripoli, Africæ.	o.*13. 9. Oc.	3.17 15.	32.*53.40.
Tridentum, Trident, Tyrolis.	o. 21.42. Oc.	5.25.30.	46. 1. 0
Tyrnavia, Tyrnau, Hung. Obſ.	o.* 4.45. Or.	1 11 15.	48.*22.58.
Valentia, Valence Gall.	o. 45 57. Oc.	11.29.20.	44. 56. o.
Valparais, Chili.	5. 52.13. Oc.	88.36.15.	33. 0.30 M
Varſavia, Warſchau, Poloniæ.	o.†18 39. Or.	4.39.45.	52. 14.28.S.
Venetiæ, Venedig.	o. 16 30. Oc.	4. 7.30.	45.†27. o.
Verona, Italiæ.	o. 21.25. Oc.	5.21.15.	45.*26.26.
Vienna, Wien, Auſtriæ. Obſ.	o. o. o.	o. o. o.	48. 12.36.
Vilna, Lithuaniæ obſerv. Reg.	o. 35.37. Or.	8.54.15	54.*41. 3.
Vratislavia, Breßlau, Sileſiæ.	o.* 2.40. Or.	o 40. o.	51. 6.30.
Ulma, Ulm, Sueviæ.	o. 25.45. Oc.	6.26.15.	48. 24 o.
Uliſſipo, *Lisbona*, Portugaliæ.	1.*42. 5. Oc.	25 31.15.	38.*42 20.
Upſala, Upſal, Sueciæ.	o.* 5. 1. Or.	1.15.15.	59.*51.50.
Uraniburgum, Inſula Zelandiæ,	o.*14.39. Oc.	3.39 45.	55. 54 15.
Wittemberga, Wittemberg, Sax.	o 14.10. Oc.	3.32.30.	51. 53. o.
Wezlas, Arx Auſtriæ.	o.* 4.10. Oc.	1. 2.30.	48. 36.30.
Ylo, Peruviæ.	5.*50.22. Oc.	87 35.30.	17.*36.15 M
Zagrabia. Agram, Croatiæ.	o. 0.48. Oc.	0.12 o	46 6. o S

TABULA XVIII.

Gradus correſpondentes Thermometrorum uſu receptorum, ſuppoſitis diviſionibus uniformibus.

	Thermometr. D. de Reaumur.	Thermometr. Domini De l'Isle.	Thermometr. Domini Fahrenheit.	Thermometr. Domini De la Hire.
Gradus Thermometri Reaumuriani ſupra terminum Congelationis.	38	80 3	117 4	
	36	84 1	113 0	
	34	88 0	108 5	
	32	91 9	103 9	
	30	95 8	99 5	83 8
	29	97 7	97 2	81 5
	28	99 6	95 0	79 8
	27	101 4	92 7	78 1
	26	103 3	90 5	76 3
	24	107 1	86 0	73 8
	22	110 9	81 4	69 1
	20	114 7	77 0	65 8
	15	124 4	65 7	57 2
	10	133 9	54 5	48 6
	Cong. 0	153 0	32 0	31 3
Ejusdem Thermometri infra terminum Congelationis.	5	162 6	20 8	22 7
	6	164 5	18 5	21 0
	7	166 4	16 2	19 2
	8	168 3	13 9	17 5
	9	170 2	11 6	15 8
	10	172 1	9 5	14 0
	11	174 0	7 0	12 3
	12	175 9	4 7	10 6
	13	177 8	2 4	8 9
	14½	180 7	0 0	6 2
	15	181 6	1 2	5 4
	18	187 0	8 5	0 0
	30	210 3	35 5	
	70	288 8	124 5	
	166	470 0	339 0	
	181	500 0	372 0	

Comparatio hæc intelligitur cum Thermometro Reaumuriano, in prima columna poſito.

TABULA XIX.

Reductio Refractionum mediarum Tabulæ V. ad Refractiones veras secundum altitudines Barometri & Thermometri Reaumuriani in partibus pedis Viennensis.

Altit. Barometri	Divisor Refractionis Mediæ	Altit. Barometri	Divisor Refractionis Mediæ	Altit. Barometri	Divisor Refractionis Mediæ	Altit. Thermom. Reaumur.	Divisor Refractionis primo correct.	Altit. Thermom. Reaumur.	Divisor Refractionis primo correcti
Di. Li.		Di. Li.		Di. Li.					
30 0	+ 24	28 0	− 34	26 0	− 10	30	− 13	5	+ 54
29 11	+ 26	27 11	− 30	25 11	− 10	29	− 14	4	+ 45
29 10	+ 28	27 10	− 28	25 10	− 10	28	− 15	3	+ 39
29 9	+ 30	27 9	− 26	25 9	− 9	27	− 16	2	+ 34
29 8	+ 34	27 8	− 24	25 8	− 9	26	− 17	1	+ 30
29 7	+ 37	27 7	− 23	25 7	− 9	25	− 18	0	+ 27
29 6	+ 42	27 6	− 22	25 6	− 8	24	− 19	1	+ 25
29 5	+ 48	27 5	− 21	25 5	− 8	23	− 21	2	+ 23
29 4	+ 56	27 4	− 20	25 4	− 8	22	− 23	3	+ 21
29 3	+ 67	27 3	− 19	25 3	− 8	21	− 25	4	+ 19
29 2	+ 84	27 2	− 18	25 2	− 8	20	− 27	5	+ 18
29 1	+ 112	27 1	− 17	25 1	− 8	19	− 30	6	+ 17
29 0	+ 168	27 0	− 16	25 0	− 8	18	− 34	7	+ 16
28 11	+ 336	26 11	− 15	24 11	− 7	17	− 39	8	+ 15
28 10	− 0	26 10	− 15	24 10	− 7	16	− 45	9	+ 14
28 9	− 336	26 9	− 14	24 9	− 7	15	− 54	10	+ 13
28 8	− 168	26 8	− 14	24 8	− 7	14	− 68	11	+ 13
28 7	− 112	26 7	− 13	24 7	− 7	13	− 90	12	+ 12
28 6	− 84	26 6	− 12	24 6	− 7	12	− 135	13	+ 12
28 5	− 67	26 5	− 12	24 5	− 7	11	− 270	14	+ 11
28 4	− 56	26 4	− 12	24 4	− 6	10	0 0	15	+ 11
28 3	− 48	26 3	− 11	24 3	− 6	9	+ 270	16	+ 10
28 2	− 42	26 2	− 11	24 2	− 6	8	+ 135	17	+ 10
28 1	− 37	26 1	− 11	24 1	− 6	7	+ 90	18	+ 10
28 0	− 35	26 0	− 10	24 0	− 6	6	+ 168	19	+ 9
						5	+ 54	20	+ 9

Quotum ex divisione Refractionis Mediæ ortum *Adde* vel *Subtrahe*, prout divisor fuerit + vel −.

Quotum *Adde* vel *Subtrahe* a Refractione primo correcta prout divisor fuerit + vel. −

USUS EPHEMERIDUM ET TABULARUM ASTRONOMICARUM.

Cum usum harum Ephemeridum pluribus annis in tironum gratiam fuse explanaverimus, superfluum sane foret, omnia illa identidem repetere, quæ facile in Ephemeridibus ab anno 1757. ad annum 1764. dilucide exposita reperiri possunt. Ea tamen, quæ in usum quotidianum veniunt, his in Ephemeridibus retenta sunt (ne earum usus minus commodus videatur) sed methodo compendiaria proposita.

Iuverit vero præcipua quædam adnotasse, quæ hic prætermissa, & ex aliorum annorum Ephemeridibus petenda sunt.

EXPLICATIO DISCRIMINIS DIEM INTER ASTRONOMICUM ET CIVILEM,

vide Ephem. An. priorum.

PROBLEMA.

Convertere tempus Astronomicum in civile, & vicissim.

Vide Ephem. An. priorum.

EXPLICATIO TEMPORIS MEDII, ET VERI, SEU, APPARENTIS.

Vide Ephem. An. priorum.

PROBLEMA

Examinare motum penduli horologi, num is motui medio Solis seu tempori medio respondeat.

Vide Ephem. An. priorum.

E MERIDU

ET

STRONOMICAR

eridum pluribus annis i
mus, superfluum sane
quæ facile in Ephemer
ci lucide exposita repe
tidianum veniunt, his
arum usus minus commo
ria proposita.
ædam adnotasse, quæ
Ephemeridibus peten

RIMINIS DIE
CUM ET CIVIL
An. priorum.

L E M A
nicum in civile, &
An. priorum.

ORIS MEDII
PPARENTIS.
In. priorum.

E M A
ologi, num is
dio respondeat.
. priorum.

PROBLEMA I.

Tempus verum convertere in medium.

Cum observationes habitæ, aut habendæ exhibeantur semper in tempore vero, e contra, horologia pendula semper tempus medium indicent, necesse est, nosse methodum convertendi tempus verum in medium, & vicissim. Fit hæc conversio ope columnæ 5tæ., cujus usus hic est.

Videatur in colûmna quinta, paginæ primæ dati mensis & diei, *tempus medium meridiei veri*, pariterque incrementum vel decrementum temporis medii in columna sexta; ope cujus instituatur proportio: ut 24. horæ ad numerum columnæ 6tæ, ita datæ horæ convertendæ, ad partem proportionalem, quæ ad tempus medium meridiei veri addita, si crescit, vel ab eo subtracta, si decrescit, dat tempus medium datis horis respondens. Hoc ipsum, si 24 horas superat, datis horis adjectum, vel ejus complementum, si 24 horis minus sit, ab iis subtractum, tempus medium quæsitum dabit. Praxim exemplum claram reddet: In Ephemeridibus A. 1796. Mense Januario in columna Phænomenorum ⊙ habetur: ingressus ⊙ in ♒ die 19. h. 18. m. 47. quæritur tempus medium.

In columna 6ta pagina prima mensis Januarii int. 19 & 20 habetur incrementum diurnum temporis medii 17″ 8; fiat itaque proportio ut 24. h. ad 18. h. 47′. ita 17″ 8. ad quartum 14″; qui ad 11′ 10″ 6. tempus meridiei veri die 19, quia crescit, additus, dat tempus medium datis horis respondens 11′ 24″ 6. Hoc ipsum vero, cum 24 horas superet, additivum est: erit ergo tempus medium quæsitum 18 h. 58′ 24″ 6.

PROBLEMA II.

Datum tempus medium convertere in verum.

Cum observationes omnes fiant ad horologia pendula, adeoque tempora media adscribantur, dum actu fiunt, opus est reductione temporis medii ad verum, ut habeantur momenta vera temporis, quibus observationes factæ sunt. Fit hæc

conversio eadem prorsus methodo, qua prioris problematis, sed titulis contrario sensu applicatis; id est, si tempus medium Ephemeridum superat horas 24. tum reductio est *subtractiva*, *additiva* contra, si tempus medium Ephemeridum minus est horis 24. Ex. Gr. Immersio Satillitis I. Jovis Viennæ Austriæ 1796. mense Jul. die civili 12. observata est contigisse hora 3. 30′ 10″ mane, seu astronomico die 11. h. 15. 30′ 10″, quæritur tempus verum hujus immersionis.

In columna 5ta ad meridiem dati mensis die 11. habetur *tempus medium meridiei veri*, h. 0. 5′ 7″ 1. itaque *titulo contrario*, subtrahantur a dato tempore medio, & habebuntur horæ 15. 25′ 2″ 9. Porro numerus columnæ 6tæ inter die 11. & 12. Jul. est, 7″ 6. sub signo +, factaque proportione: ut 24. h. ad, 7″ 6. ita h. 15 25′ 2″ 9. ad 4″ 9; quæ titulo contrario, nempe *subtrahendo*, applicata dant tempus verum immersionis Satellitis I. Jovis astronomicum die 11. h. 15. 24′ 58″; seu civile die 12. h. 3. 24. 58″ mane, prout in his Ephemeridibus notatur. *Hac methodo observationes omnes factæ tempore medio (seu ad motum horologii exacte correcti) reducuntur ad tempus verum.*

USUS COLUMNÆ 7. & 8.
PAGINÆ CUJUSVIS MENSIS PRIMÆ.

Numeri hujus columnæ nihil sunt aliud, quam differentiæ Ascensionis rectæ Solis culminantis conversæ in tempus ope Tab. XXII. quæ sunt veræ distantiæ 0 ♈ a *Meridiano*, dum Sol culminat. Tempora hæc, vera quidem sunt, at consulto non correcta, ope partis proportionalis, *datis horis* respondentis. Quare non eo sensu acceptum volumus tempus hoc verum hujus columnæ, quasi punctum 0 ♈, aut stella fixa in hoc puncto existens tempore in columna signato culminaret; notum enim est, si hoc quæratur, adhibendam esse correctionem columnæ 8væ. His positis, usus hujus columnæ potissimum est in inveniendo tempore vero culminationis stellæ cujusdam, cujus nota est ascensio recta conversa *in tempus*.

PROBLEMA III.

Data die invenire tempus verum Culminationis stellæ cujusdam in Meridiano Observatorii Viennensis.

E catalogo fixarum, his Ephemeridibus inserto, excerpatur Ascensio recta stellæ datæ in tempus conversa, excerpatur quoque e columna 7ma, paginæ primæ dati mensis, & datæ diei tempus verum distantiæ o ♈ a meridiano; addantur hæ quantitates in unam summam, dabit hæc (si non excedat horas 24.) tempus verum Culminationis stellæ, sed nondum correctum; ut habeatur correctum, excerpatur pro data die e columna 8va acceleratio fixarum præ motu Solis vero, tum fiat proportio, ut 24 h. ad accelerationem fixarum columnæ 8væ, ita horæ Culminationis paulo ante inventæ ad partem proportionalem, semper subtrahendam ab inventis horis, qua rite applicata, habebitur satis præcisum tempus verum Culminationis stellæ. Quod si summa Ascensionis, & Distantiæ o ♈, excedat horas 24, subtrahantur horæ 24. et residuæ horæ indicabunt tempus verum Culminationis stellæ pro data die quæsitum.

EXEMPLUM I.

Quæritur anno 1796 die 22, Februarii tempus verum Culminationis *Spicæ* ♍ in meridiano Observatorii Viennensis? In catalogo fixarum harum Ephemeridum est Ascensio recta in tempore stellæ *Spicæ* ♍ h. 13. 14′ 27″ 0. In columna 7ma paginæ primæ mensis Februarii, die 22 est Distantia o ♈ a meridiano h. 1. 37′ 49″. 7 quæ simul addita efficiunt horas 14. 52′ 16″ 7. Excerpatur e columna octava acceleratio fixarum præ motu Solis vero pro die 22. Febr. 3′ 48″ 2. fiat analogia; ut 24 h. ad 3′. 48″ 2. ita h. 14. 52′ 16″ 7. ad 2′ 21″ 4., quæ subtracta ab h. 14. 52′ 16″ 7. dant tempus verum correctum Culminationis *Spicæ* ♍ die 22. Febr. h. 14. 49′ 55″ 3.

EXEMPLUM II.

Quæritur, quonam tempore vero *Arcturus* culminarit Viennæ in Observatorio anno 1796. die 20. Maji, qua die

Sol versatur in ejus parallelo. E catalogo fixarum Ascensio recta *Arcturi* conversa in tempus habetur h. 14. 6′ 24″. 5. Distantia ☉ ♈ a meridiano die 20. Maji est 20. h. 8 34″ 3.; harum summa habetur 34. h. 14′ 58′ 8 & cum horæ excedant horas 24; habebuntur horæ 10 14′ 58″ 8. Acceleratio fixarum e columna 8va, pro die 20. Maji est: 4′ 0″ 1. & facta analogia: ut 24 h. ad 4′ 0′ 1. ita 10. h. 14′ 58″ 8 ad 1′ 42″ 5. quibus subtractis, habetur tempus verum correctum Culminationis *Arcturi* die 20 Maji, hora 10. 13′ 16″ 3.

PROBLEMA IV.

Dato tempore horologii, dum stella quæpiam culminat, invenire tempus verum correctum Culminationis stellæ, itemque tempus medium, quod horologium indicare debet tempore Culminationis, si recte ordinatum sit.

Ut brevitati consulamus, (cum Resolutio hujus Problematis, a priore Problemate, & antecedentibus dependeat) idem exemplum declarationi serviat.

Die 20. Maji, anno 1796. Viennæ in Observatorio observatus est culminasse *Arcturus* tempore horologii Astronomici vespere h. 10. 9, 30″ ½ quæritur tempus verum correctum, itemque medium, quod horologium indicare debuit, si recte ordinatum sit.

Tempus verum correctum Culminationis *Arcturi* inveniatur ex Ephemeridibus, ut Prob. III. dictum est, quod repertum habetur: h. 10. 13′ 16′ 3. Tempus hoc verum convertatur in medium per Probl. I. quod invenitur esse, 10. h. 9′ 30″ 6. quare cum tempus horologii Astronomici culminante *Arcturo* præcise etiam sit h. 10 9′ 30″ 6. recte igitur ordinatum habetur pendulum horologium.

Quod si tempus medium, hac methodo repertum, excedat, aut deficiat a tempore horologii, indicium est, horologium accelerare, aut retardare aut saltem indices non recte esse constitutos; verum, quanam ex parte horologium corrigendum sit, per antecedentia Problemata investigandum; itemque per Problemata subsequentia in tempus maxime præcisum inquirendum erit.

USUS COLUMNARUM
PAGINÆ CUJUSVIS MENSIS SECUNDÆ.

Pagina 2da cujusvis mensis, septem continetur columnis, quarum *prima* dies complectitur Mensis, *secunda* longitudines ⊙ veras in Ecliptica, dum Sol in meridiano versatur, exhibet. *Tertia*: motus Solis verus horarius continetur: cujus usus est in invenienda longitudine ⊙ pro tempore quovis dato, ut ex sequenti Problemate constat.

PROBLEMA V.

Pro dato quocumque tempore vero invenire longitudinem Solis, seu locum in Ecliptica, in quo Sol versatur.

Quæritur 1796, die 8. Februarii h. 12. m. 6. dum Novilunium contingit, quamnam longitudinem Sol illo momento habeat, seu in quo loco Eclipticæ versetur. E columna tertia pagina secunda mensis Februarii pro die 10. excerpatur motus horarius Solis verus 2′ 31″ 7, quæ omnia reducta ad decimas, erunt 2′ 31″ 7 = 1517. hæc multiplicata per datum horarum numerum 12. producunt motum Solis pro horis 12. æqualem 18204. quæratur præterea pars proportionalis pro minut. 6 inferendo: ut 60′ seu una hora ad 6′ ita 2′ 31″ 7. ad 0′ 15″ 2. seu 152 quæ addita ad 18204, efficiunt summam 18356, seu 30′ 35″ 6. hæc addita ad locum Solis Ephemeridum columnæ secundæ mensis Februarii D. 8. ♒ 19. 30′ 8″ efficiunt locum Solis in ♒ 20 gr. 0′ 43″ 6.

Notandum: Cum tempora harum Ephemeridum sint vera, & astronomica, si dentur tempora media, & civilia, pro quibus loca quæruntur, hæc tempora prius reducenda sunt ad vera & astronomica, quod monitum & de ceteris omnibus locis ⊙ & ☽ & Planetarum observandum est.

PROBLEMA VI.

Data differentia Meridianorum inter Meridianum Viennensem, & loci alicujus Telluris, invenire longitudinem solis culminantis pro loco dato, & data die.

Quæritur Ex., Gr. Parisiis anno 1796. die 28. Martii, quamnam longitudinem habuerit centrum Solis, dum in meridiano Parisino versabatur? Distantia Meridiani Parisini á Viennensi (ut habetur Tab. XXIX.), est 56′ 10″ temporis occidentem versus.

Cum tempus verum Viennæ, Sole Parisiis culminante (ob distantiam occidentalem) semper sit 0. h. 56′ 10″, adeoque post meridiem: si pro hoc momento datæ diei quæratur longitudo Solis per Probl. V., erit longitudo hæc Solis inventa, ea ipsa, quæ quæritur pro momento Culminationis loci Parisini; reperitur nempe per resolutionem Probl. V, pro die 28 Martii ♈ 8. gr. 31′ 45″ 6.

Quod si distantia dati Meridiani sit orientalis respectu Meridiani Viennensis, hæc distantia temporaria T. XXIX, subtracta ab horis 24. dat horam, quæ est Viennæ, dum Sol in loco orientaliore culminat, & quidem horæ repertæ semper sunt diei antecedentis. Quæritur Ex Gr. longitudo Solis culminantis Petropoli in Russia anno 1796. die 28. Martii Juxta Tab. XXIX. Petropolis orientalior habetur Meridiano Viennensis 55′ 50″ temporis, quibus subtractis ab horis 24. relinquitur hora 23. h. 4′ 10″, quæ est Viennæ Sole Petropoli culminante, pro quo tempore inventa longitudo Solis per Probl. V. habetur ♈ 8. gr. 27′ 9″ 4.

USUS COLUMNÆ. 4^{tia} & 5ta PAGINÆ CUJUSVIS MENSIS SECUNDÆ.

Columna *tertia* & *quarta* habentur, ascensiones rectæ Solis culminantis; columna *tertia* has in gradibus, *quarta* in tempore exhibet. Usus harum hic est:

PROBLEMA VII.

Ope ascensionis rectæ Solis in tempore, invenire tempus verum Culminationis stellæ cujusdam.

Quæritur Ex. Gr. die 20. Maji 1796 quonam tempore vero culminet *Arcturus* in Observatorio Viennensi? Ab ascensione recta *Arcturi* in tempore, quæ habetur in catalogo fixarum harum Ephemeridum 14 h. 6′ 24″ 5. subtrahatur datæ diei 20 Maji ascensio recta Solis conversa in tempus, quæ est 3. h. 51′ 25″ 7. residuum 10 h. 14′ 58″ 8. corrigatur ope columnæ 8væ pag. 1. hujus mensis, subtrahendo partem proportionalem 1′ 42″ 5. & habebitur tempus verum correctum Culminationis *Arcturi* die 20 Maji h. 10. 13′ 16″ 3. prorsus idem, quod Problemate III. Exemplo II. repertum habebatur.

Quod si ascensio recta stellæ minor sit ascensione recta Solis, ascensio recta stellæ augenda est horis 24. ut subtractio ascensionis rectæ solis institui possit. Ascensionis rectæ conversæ in tempus perquam commodus usus est in Planetarum Culminationibus.

USUS COLUMNÆ 6tæ & 7mæ.

PAGINÆ CUJUSVIS MENSIS SECUNDÆ.

Columna *sexta* declinationem ☉ culminantis in dies singulos calculo trigonometrico ad angulum Eclipticæ pag. tertia relatum, determinatam exhibet, cujus usum, præter cetera, sequentia problemata complectuntur.

PROBLEMA VIII.

Dato quovis tempore invenire declinationem ☉

Resolutio hujus Problematis eadem est, quæ Problematis V. Hic adnotasse juverit, quod Problemate V. monitum, si præcisa desideretur Declinatio, eam methodo Tri-

gonometrica eruendam esse, propterea, quia hæc crescit. vel decrescit non ratione temporis, sed longitudinis ☉ in Ecliptica.

PROBLEMA IX.

Data altitudine centri ☉ meridiana vera, dataque declinatione ☉, invenire latitudinem loci, & altitudinem Æquatoris supra horizontem.

Vide Ephem. annorum priorum,

PROBLEMA X.

Data altitudine vera Astri cujusvis supra horizontem, dataque elevatione Poli, invenire tempus verum factæ observationis, & vicissim, dato tempore vero invenire altitudinem Astri cujusvis supra horizontem.

Resolutio hujus Problematis utilissimi, unica fere est methodus, eaque tutissima, quæ ab observatoribus Navarchis in mari navigantibus usurpari solet ad reperiendum tempus verum factæ alicujus observationis Astronomicæ. Maximi quoque usus est Astronomis sive in itinere constitutis, sive in locis peregre versantibus, atque instrumentorum apparatu destitutis, aut etiam in Observatoriis instructissimis pro tempore inclementiæ aëris, qua seu Culminationes Solis, & fixarum, seu correspondentes altitudines per dies aliquot observandæ impediuntur. Resolutio autem Problematis sequens est, quæ in Trigonometria sphærica passim demonstrata reperitur.

I. *Altitudo exacte observata Astri cujusdam ad veram* (correcta refractione & parallaxi, & aliis) *reducatur.*

II. *Ex Ephemeridibus calculetur declinatio Astri pro ratione differentiæ meridianorum a loco Ephemeridum, & pro tempore circiter accepto factæ observationis.*

III. *Addantur in unam summam: Complementum altitudinis veræ Astri, Complementum elevationis Poli loci dati, & distantia Astri a Polo*; est autem hæc distantia semper æqualis 90. gradibus *minus* declinatione Astri, si tam declinatio, quam elevatio Poli sint ejusdem denominationis, contra vero, si diversæ sint denominationis, erit distantia Astri æqualis 90. gradibus *plus* declinatione Astri.

IV. *Hujus summæ accipiatur semissis; ab hac semisse subtrahatur*: primo *Complementum elevationis Poli, ut habeatur* excessus primus; *ab eadem semisse auferatur distantia Astri a Polo, & habebitur* excessus secundus.

V. *Sumantur Logarithmi sinus horum duorum excessuum, addantur que ad logarithmum duplum radii, seu sinus totius, dein ab hac summa subtrahatur summa logarithmi sinus complementi elevationis Poli, plus logarithmo sinus distantiæ Astri a Polo. Demum residui logarithmi accipiatur semissis, erit hæc semissis logarithmus sinus arcus cujusdam, qui duplicatus dat distantiam Astri a Meridiano in gradibus*, qua habita habetur quoque tempus verum acceptæ altitudinis, ut infra ostendam.

Ex. Gr. Anno 1790. a navigantibus in mari Atlantico haud procul ab insf. Ferri sub latitudine boreali 17 gr. 47', atque haud procul a *Meridiano primo*, die 30 Julii, ad explorandum motum horologii astronom. a Navarcho observata habeatur altitudo centri Solis, a refractione & ceteris correcta, seu vera, 31. gr. 35' sole versante in plaga occidentali, tempus horologii erat h. 4. m. 3. Quæritur tempus verum.

Ante calculum trigonometricum, pro tempore circiter tantum accepto horologii, reperiatur declinatio Solis ex Ephemeridibus, quæ erit 18 gr. 24'. 43''. seu 18. gr. 25'. Borealis; igitur:

Complem. Altitud. ☉ = 58°. 25′.
Complem. Elevat. Poli. = 72. 13.
Distantia a Polo = 71. 35.

Summa = 202. 13.
Semissis = 101. 6½.
Complem. Elevat. Poli — 72. 13.

Excessus Primus = 28. 53½ Log. sin. = 9,68408
Distantia a Polo — 71. 35.

Excessus secundus = 29. 31½. Log. sin. = 9,69267
Duplus Log. sin. tot. = 20,00000

Log. sin. 72° 13′ = 9,97873 } Summa = 39,37675
Log. sin. 71. 35. = 9,97716 } — = 19,95589

Summa = 19,95589. Residuum = 19,42086
Semissis = 9,71043

Hæc semissis ultima (9,71043) est Log. sinus arcus 30. gr. 53′ 20″. cujus duplum 61. gr. 46′ 40″. conversum in tempus ope Tab. X dat horam 4. 7′. 6″. 7. igitur, cum tempus horologii fuerit h. 4. m. 3. noscitur tardius indicare tempus verum 4′ 6″. 7.

Quando observata habetur altitudo vera stellæ Fixæ aut Planetæ, hoc casu, præter jam dicta calculandum est quoque tempus culminationis stellæ, aut Planetæ pro loco observationis secundum differentiam Meridianorum, vel certam ex Ephemeridibus, vel circiter ex Mappis Geographicis, aut Nauticis acceptam; & quidem pro die observationis, & die antecedente, vel consequente, prout observatio facta ante, vel post culminationem exigit. *Secundo*, arcus ope calculi trigonometrici, paulo ante expositi, repertus in gradibus, non per Tabulam X. sed ope hujusmodi Analogiæ convertendus est in tempus: ut 360. gr. *ad revolutionem integram stellæ, aut Planetæ in tempore* (id est temporis intervallum inter duos appulsus consequentes ad Meridianum) *ita inventa distantia Astri a Meridiano in gradibus ad tempus quæsitum*. Quod tempus a tempore culminationis Astri *subtractum* (si observatio facta fuit in plaga orientali) vel *addi-*

...(si observatio fuit in plaga occidentali) dabit tempus verum factæ observationis.

Ex. Gr. in Observatorio Regio Viennensi Anno 17.. die 31. Martii vespere circa horam 9. observata est altitudo apparens Reguli in plaga orientali 54. gr. 41'. 8''. quæ a refractione &c. correcta, vera habetur: 54 gr. 40'. 21''. Declinatio correcta Reguli pro hoc tempore est, 12 gr. 59'. 28''. Latitudo Vienn. 48. gr. 12'. 36''. culminat Regulus Viennæ 31. Martii h. 9. 15'. 40''. intervallum revolutionis Reguli habetur; 23. h. 56'. 22''. His positis:

Complem. Alt. a ♌ =	35°.	19'.	39''.	
Complem. Elev. Poli =	41.	47.	24.	
Dist. a ♌ a Polo =	77.	0.	32.	
Summa =	154.	7.	35.	
Semissis =	77.	3.	47½	
Complem. Elev. Poli =	41.	47.	24.	
Excessus primus =	35.	16.	23½	Lo.sin. = 9,75153
Distantia a ♌ a Polo =	77.	0.	32.	
Excessus secundus =	0.	3.	15½	Lo.sin. = 6,97672
			Dulp. Log. S. t. =	20,00000

Log. sin. 41°. 47'. 24''. = 9,82373. } Summa 36,73825
Log. sin. 77°. 0'. 32''. = 9,98883. } - - - 19,81257

Summa 19. 81257 Resi. = 16,92569
Semissis = 8,46284

Hæc Semissis (8,46284,) est Log. sinus arcus 1. gr. 39'. 49''. cujus duplum 3. gr. 19'. 38''. conversum in tempus ope antedictæ Analogiæ, ut 360. gr. ad 23. h. 56'. 22''. ita 3. gr. 19'. 38''. ad 13'. 17''. quæ 13'. 17''. subtracta a tempore vero Culminationis a ♌ die 31 Martii, nempe a 9. h. 15'. 40''. dant tempus verum factæ observationis 9 hora 2'. 23''

Quod si jam dato tempore vero, quæratur Astri alicujus altitudo vera supra horizontem loci dati, in hanc ope sequentium binarum Analogiarum inquirendum est.

ANALOGIA Ima.

Ut sinus totus ad sinum complementi arcus (qui est intervallum conversum in gradus, inter Culminationem Astri, & datum tempus) *ita tangens complementi Elevationis Poli ad tangentem arcus cujusdam, qui interea appelletur X.*

Hic arcus X. subtrahatur a distantia Astri a Polo (*quæ est, ut ante dictum, 90. gr. minus Declinatione Astri, si sint ejusdem denominationis, contra si sint diversæ, erit distantia Astri a Polo, 90. gr. plus declinatione Astri*) & habebitur arcus, qui appelletur Y.

Nota: *Si intervallum in culminationem Astri, & datam horam excedat horas 6, seu majus sit 90. gradibus, arcus X. addendus est ad distantiam Astri a Polo, ut habeatur arcus Y.* Tum fiat secunda Analogia.

ANALOGIA IIda.

Ut sinus complementi arcus X. ad sinum complementi arcus Y. ita sinus elevationis poli, ad sinum altitudinis veræ Astri supra horizontem.

Praxis idem exemplum clarum reddet; sit E. Gr. quærenda altitudo vera *Reguli* in Observatorio Regio Vien. Anno 1790. die 31 Martii h. 9. 2′. 23″. post meridiem. Culminat *Regulus*, h. 9. 15′. 40″. intervallum culminationum consequentium est, 23 h. 56′. 22″. intervallum temporarium inter Culminationem *Reguli*, & datum tempus est, 13′. 17″. quod conversum in gradus ope Analogiæ: ut 23 h. 56′. 22″. ad 360. gr. ita 13′. 17″. ad 3 gr. 19′. 45″. 3; quibus habitis.

Sinus Compl. arcus 3.°19′45,′ = 86.°40′15″ Log. = 9,99927
Tang. Compl. Elev. Poli = 41.°47′, 24″. Log. = 9,95123

Summa = 19,95050
Logarith. S. t. = 10,00000

Logarith. Tang. arcus X = 9,95050
Habetur ergo arcus X = 41.° 44′. 31″.
Distantia α ♌ a Polo = 77. 0. 32.

Arcus Y = 35. 16. 1.
Sinus Compl. arcus Y = 54.°43′ 59″ Log. = 9,91194
Sinus Elevat. Poli = 48. 12. 36. Log. = 9,87250

Summa = 19,78444
Sinus Compl. arcus X = 48.°15′,29″. Log. — 9,87283

= 9,91161

Huic Logarithmo respondet sinus arcus 54. gr. 40′. 21″. quæ est altitudo vera *Reguli* pro dato tempore cui si applicetur refractio Tab. XVII. habebitur altitudo apparens 54 gr. 41′. 8″. quam superior observatio ad hunc diem exhibet.

USUS PAGINÆ CUJUSVIS MENSIS TERTIÆ.

Pagina cujusvis mensis tertia, in novem distincta habetur columnas, quæ omnes Solem attinent. *Prima* habet dies mensis, tres sequentes columnæ Solis culminantis diametros apparentes; moras disci ☉ per meridianum, & ejusdem distantias a tellure in dies singulos supputatas complectuntur, quarum hic potissimum usus habetur.

USUS COLUMNÆ 2tæ. 3tiæ & 4tæ PAGINÆ CUJUSVIS MENSIS TERTIÆ.

Secunda columna diametros ☉ culminantis apparentes in dies singulos exhibet in partibus circuli maximi secundum Anomaliam ☉ diurnam e Tabulis D Tobiæ Mayer calculatam. Hæ diametri ☉ apparentes nihil aliud sunt, quam arcus circuli maximi, quos discus ☉ subtendit e terra visus, qui pro ratione distantiæ a terra variantur; anno 1796 diameter ☉ minima 31. m. 33. s. 8. habetur die 30. Junii, quo die scilicet ☉ est apogæus. Maxima e contra 32. m. 38. s. 6. apparet die 30. Decembr, Sole perigæo. Usus hujus 2dæ columnæ hic est.

PROBLEMA IX.

Data altitudine visa limborum ☉ culminantis invenire altitudinem veram centri ☉

Notum est Astronomis practicis, altitudinem centri ☉ culminantis per instrumenta immediate, & accurate determinari non posse ob amplitudinem disci, sed eam obtineri ope altitudinis limborum per filum fixum, aut mobile micrometri captam & mensuratam. Hinc praxis quidem exigit, ut ope ejusdem micrometri eodem tempore, quo altitudo limbi alicujus definitur, mensuretur quoque diameter ☉ apparens, atque hæc dimidiata, & correcta (per refractionem, & parallaxim) ab altitudine limbi superioris subtrahatur, aut ad limbum inferiorem addatur, ut obtineatur altitudo centri ☉ vera. At enim quia sæpissime contingere notum est, ob circumstantias varias, diametrum apparentem actu, cum altitudo limbi capitur, mensurari non posse; usus hujus columnæ 2dæ hoc casu perquam commodus est. Ut exemplo declaratur.

EXEMPLUM.

1796. die 20. Martii ipsa nempe, qua constat ex Ephemeridibus contingere debere æquinoctium vernum, Sole cul-

minante in Obſervatorio Vien. obſervata ſupponitur altitudo viſa limbi Solis ſuperioris 42. gr. 18′. 29″. ſubtractis 58″. 1. ob correctionem refractionis & parallaxis, reſtat altitudo limbi ſuperioris vera 42. gr. 17′. 30″. 5. excerpatur ex Ephemeridibus diameter Solis apparens ad diem 20 Martii, quæ habetur 32′. 11″. 0. cujus ſemiſſis 16′. 5″. 5. ſubtracta ab altitudine limbi Solis ſuperioris vera & correcta, dat quæſitam altitudinem centri Solis culminantis veram die 20. Martii 42. gr. 1′. 25″. inde colligitur Solem jam ingreſſum eſſe ♈ cum reperta altitudo Solis meridiana major ſit altitudine Æquatoris Viennenſi, quæ habetur 41. gr. 47′. 24″.

Quodſi obſervata ſit altitudo limbi ☉ inferioris, hoc caſu ſemidiameter Solis apparens addenda erit.

Idem hoc Problema facile applicatur ad omnes altitudines Limborum ☉ ſupra horizontem viſas.

Columna 3tia ejusdem paginæ moras tranſitus diſci ☉ per meridianum in uſus ſequentes complectitur.

PROBLEMA XII.

Invenire momentum verum temporis, dum Solis centrum in Meridiano Viennenſi culminat.

Ex uſu obſervationum aſtronomicarum conſtat, ſi momentum temporis accuratum deſideretur, quo centrum ☉ culminat (ſeu id inquiratur per lineam meridianam, ſeu per tubos meridianos filis verticalibus inſtructos ſeu quacunque methodo, quæ diſcum ☉ exhibet) opus eſſe, ut notentur accurate momenta horologii, dum limbus ☉ occidentalis & orientalis ad fila meridiana appellit. Tempus enim horologii, quod inter appulſum limbi orientalis & occidentalis interlapſum eſt, diviſum bifariam, & vel a tempore appulſus limbi orientalis, ſeu poſterioris ſubtractum, vel ad tempus limbi occidentalis, ſeu anterioris additum, dat momentum verum temporis, quo centrum ☉ in meridiano culminabat. Praxim in Tironum uſum exemplo declaraſſe juverit.

EXEMPLUM.

1796. die 22. Septembris, quo Æquinoctium autumnale mane contigit, ad horologium pendulum exactum Viennæ

in Obſervatorio habetur limborum ⊙ ad lineam meridianam appulſus tempore medio:

	H.	M.	S.	
Appulſus limbi ⊙ occident.	11.	51.	16½.	Differentia.
limbi ⊙ orient.	11.	53.	24½.	2. m. 8. s.
+ vel —	1.	4.	dim.	1. m. 4. s.
Tempus medi. cent. ⊙ culm.	11.	52.	20½.	

Quia vero, cœlo non favente, aut ob alias circumſtantias utriusque limbi ⊙ appulſus, ſæpe haberi nequeunt, defectum hunc ſupplet columna 3tia paginæ cujusvis menſis 3tiæ moram tranſitus diſci ⊙ per meridianum in dies ſingulos exacte exhibens; cujus ope (obſervato alterutrius limbi duntaxat appulſu) momentum verum temporis haberi poteſt centri ⊙ culminantis.

Uſus autem hic eſt, tempus in hac columna ſignatum dividatur bifariam, hujus dimidium ad tempus obſervationis limbi occidentalis, ſeu prioris *additum*, aut a tempore obſervationis limbi orientalis, ſeu poſterioris ⊙ *ſubtractum*, exhibet momentum verum temporis centri culminantis.

EXEMPLUM I.

1796. Die 15. Januarii obſervatur tempore medio horologii penduli, in tubo Quadrantis fixi Meridionalis.

	H.	M.	S.
Appulſus limbi ⊙ occid.	0.	8.	42.
Dimid. moræ Tranſit. Ephemer.	+	1.	10.
Momentum ver. culm. centri	0.	9′.	52″.

EXEMPLUM II.

1796. Die 20. Febr. in linea Meridiana.	H.	M.	S.
Appulſus limbi ⊙ orient.	0	15.	12″.
Dimid. moræ Tranſit Ephemer.	—	1.	6.
Momentum ver. culm. centri.		14.	6″.

Columna 4ta paginæ tertiæ cujusvis menſis diſtantias Solis a tellure (ſupponendo ſemi-axem majorem ellipſeos

orbitæ telluris = 10000) ad dies ſingulos exhibens, in calculandis Lunæ, aliorumve Planetarum diſtantiis, & angulis quam plurimos in Aſtronomia practica uſus habet, quos brevitatis cauſa prætermittere cogimur.

PROBLEMA XIII.

Dato tempore factæ obſervationis ſecundum horologium, cujus motus & indices a tempore medio aberrant, datis item duobus Meridiebus obſervatis ad idem horologium, invenire Reductionem obſervationis ad tempus verum.

Ex Gr. ſit Viennæ An. 1793. die 4. Januarii mane obſervata Immerſio Satellis I. Jovis tempore horologii hora 5. 47', 32''. ſeu tempore Aſtronomico die 3. h. 17. 47'. 32''. habentur autem momenta centri Solis culminantis, ſeu ex linea Meridiana, ſive ex altitudinibus ⊙ correſpondentibus *ad idem horologium* factis pro die 3. Jan. 0. h. 9'. 15''. & pro die 4. Jan. h. 0. 9'. 49''.

Supponitur autem horologium motum habere æquabilem, licet acceleratum, aut retardatum reſpectu temporis medii.

I. Cum tempus verum in Meridie ſemper ſit h. 0. 0'. 0''. patet horologium die 3. Jan. ſupra tempus verum indicaſſe 9'. 15''. & die 4. Jan. 9'. 49''. liquet etiam horologium hoc non indicare tempus medium, cum tempus medium pro die 3. Jan. ſit. h. 0. 5'. 16''. & pro die 4. Jan. 0. 5'. 44''. neque etiam accelerationem habere reſpondentem motui medio, cum acceleratio horologii ſit 34''. quæ eſſe deberet 27''. 2. itaque.

II. Quæratur, pro tempore obſervationis, ſeu pro hora 17. 47'. 32''. pars proportionalis accelerationis horologii, inferendo ut 24. horæ ad 34''. (*accelerationem horologii*) ita h. 17. 47'. 32''. ad 25''. hæc 25''. addita ad tempus Meridiei (*cum ſit creſcens*) diei 3. Januarii, efficiunt reductionem temporis horologii factæ obſervationis ad tempus verum — 9'. 40''. quare cum tempus horologii hac quantitate ſuperaverit tempus verum, dum obſervatio fieret, ſequitur, hæc 9'. 40''. eſſe *ſubtractiva* a tempore obſervationis, quaprop-

pro ratione altitudinis ſiderum ſupra horizontem ; maxima eſt in horizonte, nulla in zenith ut Tab. V. docet.

Tabula V. ad uſus refractionis ſupputata habetur, e qua, ſi refractio maxima, quæ eſt 32. m. 45. ſ. convertatur in tempus, habetur acceleratio ortus veri, aut retardatio occaſus veri ſub latitudine loci Viennenſis circiter 3. m. 30. ſ. ut inferius declarabitur.

Columna denique 8va paginæ cujusvis menſis *tertiæ*, Phænomena & obſervationes ſolis præcipuas ob oculos ponit. Reperiuntur ſcilicet in hac columna conjunctiones ſolis cum Planetis tam ſuperiores, quam inferiores, quæ obſervationes maxime faciunt ad Theoriam Planetarum magis excolendam, cum hoc caſu loca heliocentrica ſint quoque geocentrica. Indicantur tempora, quibus Sol ſit perigæus, aut apogæus, ut circa hæc tempora, methodo Flamſteediana accuratius in hæc puncta per obſervationes inquiratur, quæ methodus, cum requirat exactam Solis cum ſtellis fixis comparationem, quoad Aſcenſionem rectam, hæc autem tutiſſime inſtituatur, dum Sol in earundem parallelis verſatur, hinc in hanc columnam haud paucos dies inſeruimus, quibus Sol verſatur in parallelo ſtellarum Declinationem Solis non excedentium. In hac quoque columna determinata habentur tempora vera, quibus Sol ſignum quoddam Zodiaci ingreditur, e quibus præcipua ſunt Æquinoctialia, & Solſtitialia, illa, ut admoneant, obſervationibus præceſſionum punctorum Æquinoctialium; hæc, ſtatuendæ obliquitatis Eclipticæ incumbendum eſſe, verbo, ea inſerta reperiuntur, quæ ad Theoriam Solis & ſyſtematis ſolaris maxime facere arbitrabamur.

USUS PAGINÆ CUJUSVIS MENSIS QUARTÆ.

Quarta cujusvis menſis pagina in 8 diſtincta columnas ad Lunam, Planetam nobis viciniſſimum, at maxime laborioſum pertinet. Prima quævis columna diem menſis, 2da Longitudinem Lunæ, 3tia Latitudinem, 4ta Declinationem omnes veras exhibet; 5ta Columna nodum aſcendentem orbitæ lunaris, 6ta Diametrum Lunæ horizontalem, 7ma Pa-

rallaxim horizontalem refert. Supputata sunt omnia pro eo temporis momento, quo centrum Solis hic Viennæ culminat, e tabulis recentissimis & accuratissimis D. *Tobiæ Mayer*. 8va denique tempora vera Transituum centri Lunæ per Meridianum Observatorii Cæs. Reg. Viennensis, in dies singulos, excepta die conjunctionis, qua nullus contingit Transitus, exhibet.

Ad praxim harum columnarum quod attinet, eadem est quam locorum Solis determinatorum supra Problematibus V. VI. VIII. & aliis retuli.

USUS PAGINÆ CUJUSVIS MENSIS QUINTÆ.

Pagina cujusvis mensis *quinta* in 9 columnas partita habetur: quarum *prima* dies mensis, *secunda* longitudinem Lunæ veram, *tertia* Latitudinem, 4ta diametrum horizontalem, 5ta Parallaxin horizontalem exhibet pro hora duodecima noctis, seu sole hic Viennæ in depressione versante. Supputata sunt hæc eo consilio, ut pro dato quovis inter meridiem & mediam noctem intervallo longitudo, latitudo, diameter, & parallaxis Lunæ faciliori & magis exacto calculo erui possint.

Columnæ 6, 7, 8, & 9na congressus arctiores Lunæ cum fixis & Planetis sine respectu Parallaxeos, aut Refractionis, secundum Longitudinem & Latitudinem supputatos exhibent; in his ii duntaxat congressus referuntur, in quibus distantia centri Lunæ vera gradum unum haud multum excedit, reliqui remotiores inter Phænomena Lunæ pagina sequente recensentur.

USUS PAGINÆ CUJUSVIS MENSIS SEXTÆ.

Prima columna complectitur dies mensis, secunda ætatem Lunæ; tertia Phœnomena & observationes Lunæ exhibet; referuntur in hac Lunæ Phases præcipuæ: Apogæa, &

Perigæa Lunæ, quibus temporibus (notis methodis) diametri ☽ diligenter mensurandæ, & in parallaxes horizontales inquirendum. Adnotantur quoque in hac columna tempora quibus Luna ad suos nodos pervenit, congressus item Lunæ cum fixis & Planetis, remotiores quidem, quam illi sint, qui præcedente pagina referuntur, attamen intra limites graduum aliquot, aut conjunctiones hujusmodi arctiores, quæ in aliis duntaxat horizontibus visibiles sunt. Oppositiones item Lunæ cum Planetis, & cetera, quæ opportune adferenda censebamus.

Columna altera paginæ sextæ Phænomena Planetarum continet, in qua quam plurima referuntur, quæ ad observationes Planetarum accurate instituendas requiruntur, congressus maxime Planetarum vel inter se vel cum aliis, eorumdem digressiones, & elongationes, loca nodorum, Perihelia, & Aphelia, & reliqua ad horum Theoriam necessaria. Paralleli item fixarum, in quibus signata die versantur Planetæ, quæ observationes, quia (notis methodis) etiam cum Planetis extra circulum Meridianum versantibus institui possint, plurimum perficiendæ Planetarum Theoriæ utiles sunt.

USUS PAGINÆ CUJUSVIS MENSIS SEPTIMÆ.

Hæc pagina in 7. divisa columnas in senos quosvis dies reliquorum sex Planetarum ♅, ♄, ♃, ♂, ♀, & ☿ *ortus apparentes, tempora vera culminationum in Meridiano Viennensis Observatorii, eorundem Longitudines, Latitudines & Declinationes veras Sole culminante, item occasus apparentes exhibet*; usus harum columnarum idem est, quem supra de Declinatione Solis, & Lunæ, & in aliis Problematibus declaravimus; id solum notandum, quod cum in hac pagina non in dies singulos, sed in senos, aut septenos exhibeantur Planetarum loca, si pro intermediis temporibus locus alicujus planetæ quæratur, pro primo termino analogiæ sexies, aut septies 24. horæ ponendæ veniant.

USUS PAGINÆ CUJUSVIS MENSIS OCTAVÆ.

In hac Columna pro tempore civili Eclipses omnes quatuor Satellitum Jovis, immersiones nempe vel emersiones exhibentur. De his notandum venit; cum calculus harum eclipsium centra Satellitum respiciat, tempora Immersionum calculata præcedunt plerumque tempus observatum, & contra in Emersionibus tempus observatum præcedit plerumque tempora calculata, ita quidem, ut in Satellite Imo dimidium minuti primi, in IIdo unius, in IIItio duorum, in quarto etiam trium vel quatuor minutorum primorum differentia plerumque habeatur, maxime si tubo præstante observationes instituantur.

Asterismus (*) admonet Immersionem aut Emersionem, aut etiam conjunctionem IV. Satellitis in horizonte Viennensi visum iri. Littera M vocem *mane*, V. *Vespere* indicat.

USUS PAGINÆ CUJUSVIS MENSIS NONÆ.

De apparente situ Satellitum Jovis.

Pagina cujusvis mensis nona exhibet Situm IV. Satellitum Jovis apparentem, & quidem tubo Astronomico, hoc est situ inverso, tempore Civili vero, pro hora in titulo cujusvis mensis adnotata. De hac pagina sequentia monenda veniunt. Imo circellum intermedium repræsentare discum Jovis, puncta circa discum hinc inde signata adjectis numeris indicare Satellites, & quidem eosdem, quos sociati numeri denotant; si numerus inter punctum, & discum Jovis reperiatur, indicat Satellitem ad discum Jovis accedentem, secus si punctum inter numerum, & discum Jovis situm sit, recedentem a Jove Satellitem significat. IIdo Sciendum, quod si Satelles pro tempore situs exhibiti versetur in umbra Jovis, aut post ejusdem discum, hunc ex ordine exemtum, atque ad marginem positum, majore nigro puncto designatum esse, & quidem adjecto numero, prout is aut accedens, aut recedens a Jove reperitur. Si vero Satelles versetur citra

...scum Jovis, id est in parte orbitæ suæ inter Jovem & terram positæ, is idem ad marginem positus per zerum designatur. Sub hoc habetur situs apparens Satellitum Jovis pro tempore Immersionis, aut Emersionis cujusdam Satellitis videndæ in nostro horizonte. Hunc situm eorum Observatorum gratia inseruimus, qui theoriam Satellitum ignorantes nesciunt, quanam in parte, aut in quanam a Jove distantia Satelles, aut etiam quinam e duobus Jovi vicinis eclipsim patiatur.

Menses omnes terminat pagina 105. Phases Veneris primo cujusvis mensis die situ recto exhibens; de hac, uti & sequente Tabula systematis solaris, cum omnia clara existimem, quæ moneam, haud invenio.

EXPLICATIO ET USUS CATALOGI STELLARUM FIXARUM.

Præmitto Tabulis Astronomicis duplicem Catalogum 483 ... fixarum, utrumque ex Observationibus celeberrimi Bradleji (cujus laus & nomen semper inter Astronomos vigebit) unde & merito Bradlejanum dicimus. Catalogus, qui ordine secundus, ad initium nempe Anni 1760 propositus, is ipse est, quem ex Observationibus Bradlejanis operoso calculo eruit Celeb. D. Mason & in nauticis ephemeridibus ad annum 1773 Celeb. D. Maskelyne publici juris fecit. De hoc Catalogo sequentia monuisse juverit.

Primo: Puncta præcipua, a quibus omnium reliquarum Stellarum ascensiones rectæ deductæ sunt, esse Ascensiones Stellarum quindecim, Observationibus 1175 cum sole circa æquinoctia methodo Flamsteediana comparatas: *Aldebaran* videlicet ex 21. Observationibus. *Capellæ* 56. *Rigel* 88, *α Orionis* 129, *Syrii* 136, *Castoris* 19, *Procyonis* 119, *Pollucis* 34, *Reguli* 63, *Spicæ Virginis* 74, *Arcturi* 70, *Antares*, 36, *α Lyræ* 149. *α Aquilæ* 154. *α Cygni* 47.

Secundo: Extremas observationum circa Ascensionem rectam differentias tam parum inter se discrepare, ut plerumque intra aliquot secunda consistant, vix unquam viginti attingant,

Tertio: Observationes, quibus Declinationes determinatæ sunt, plures pro quavis Stella institutas esse, tam egregio cum consensu, ut ejusdem Stellæ observationes, raro tribus secundis, nunquam vero, nec in minimæ quidem altitudinis sideribus, 5. inter se dissentiant, Barometro & Thermometro pro refractionis variatione, in subsidium adhibito.

Quarto: Variationes annuas in Ascensionem rectam & declinationem a D. Mason calculis determinatas esse, quibus pro Astronomorum commodo, variationes 10 annorum adjectæ sunt, e prioribus rite deductæ.

Quinto: Catalogum, prout Londini vulgatus est, non ipsas fixarum Declinationes, sed distantias a polo boreo continere, id est, in Stellis borealibus complementa declinationum, in australibus vero declinationes 90 gradibus auctas. Pro his a polo distantiis, ipsæ declinationes referuntur, tum ut major consensus cum Catalogo de la Caillii, aliisque sit, tum quod in comparatione planetarum cum Stellis fixis id commodius esse videatur.

Sexto: comparasse nos omnes, quas potuimus Stellas cum Catalogis de la Caillii; harum differentiæ tam quoad Ascensionem rectam, quam quoad declinationem duabus distinctis columnis referuntur. Differentiæ hoc signo (*) notatæ ex illo Catalogo elicitæ sunt, quem ex observationibus de la Cailli, Dominus Bailly ad Annum 1765. construxit, reliquæ vero ex Catalogo, quem Ephemeridibus nostris huicusque inseruimus: fecimus id hoc præcipue fine, ut egregio suo consensu, quem plerumque obtinuimus, ambo se Catalogi comprobent, & certiores reddantur observatores. Stella, ubi nullæ habentur differentiæ, in D. de la Caillii Catalogis non occurrit.

Septimo: ut facilius aberrationes actuales Stellarum ex iis, quas usque ad 1795 Ephemerid. nostris inseruimus, Tabulis eliciantur, eruisse nos accurato calculo pro quavis Stella aberrationem maximam in Ascensionem & declinationem, quæ distinctis duabus columnis referuntur.

Octavo: longitudines & latitudines, quæ ultimis duabus columnis in quavis pagina referuntur, easdem omnino esse, quas D. Mason ex ascensionibus & Declinationibus elicuit.

Nono: Quemadmodum, (ut in differentiarum columnis patet) complures fixas observavit Bradlejus, quæ in Cata-

logis de la Caillii non occurrunt, ita viciſſim complures referuntur in Catalogo de la Caillii, quo hucusque uſi ſumus, quæ in Bradlejano non habentur. Excerpſimus Aſtronomorum commodo ipſas has Stellas e Catalogo de la Caillii, quas pro Supplemento ſubnexuimus ad A. 1750; prout ipſo in Catalogo referebantur.

Atque hæc quidem de 2do fixarum Catalogo. Primus ex ipſo hoc 2do, & hujus Supplemento ſic conſtructus eſt, ut Stellæ Aſcenſionum ſuarum ordine occurrant, & numeri in prima cujusque paginæ columna poſiti Stellas Bradlejanas earumque ordinem notent, virgulæ vero Stellas de la Caillii, quarum videlicet 387. Bradleji, 96. vero de la Caillii ſunt. Aſcenſiones rectas, earumque variationes in tempus primi mobilis convertimus & utrasque, uti & Declinationes ad principium Anni currentis reduximus.

Uſus primi Catalogi ex iis patet, quæ pag. 184. dicta ſunt; de ſecundo vero id ſolum hic monuiſſe volumus, accurata variationum annuarum ratio habenda, pro dato tempore in eam ope proportionis inquirendum eſſe, cujus terminus primus ſint 365. dies, ſecundus data variatio annua, tertius ſit numerus dierum ab ultima Decemb. ad datum diem elapſus, quem indicat Columna prima paginæ cujusvis menſis primæ: quæ proportio licet magno labore non conſtet, ut tamen aſtronomorum commodo conſulatur, conſtructa eſt Tab. II.; ubi ad quosvis anni dies factor competens invenitur, per quem præceſſio annua multiplicanda eſt, ut obtineatur præceſſio dato diei reſpondens.

Tabula I. Catalogum fixarum ſequens, Accelerationem diurnam fixarum, præ motu Solis medio, id eſt, præ tempore medio horologiorum, exacte correctorum continet: hæc uſus habet varios, inter quos præcipuus eſt examen pendulorum horologiorum, num recte conſtituta ſint; ut nunc declaraturi ſumus.

Uſus Tabulæ I.

Tabula I. in binas diviſa eſt partes. Pars prima Accelerationem continet fixarum præ motu medio Solis: ſeu ad horologium ſecundum tempus medium regulatum „ Dico

„ autem accelerationem fixarum hanc esse, tempus medium, „ quod intercedit ab una culminatione fixæ ad quotcunque „ alias: seu quod idem est, ab uno appulsu fixæ ad horarium „ quemvis usque ad alterum appulsum ad eundem horarium „ in tempore medio computata. „ Hinc acceleratio hæc fixarum confundi non debet cum altera illa, quæ est differentia inter Culminationem fixæ & Culminationem Solis medio motu incedentis, quam exhibet pars altera Tabulæ sub titulo, *Retardationes Culminationum Solis motu medio incedentis in tempore fixarum computata.* Hæc enim pars altera hujus tabulæ continet Accelerationem fixarum pro tempore Culminationis Solis medii, & quidem in tempore fixarum, seu indicat, quanto arcu fixa distet a Sole medio pro tempore culminantis Solis medii in tempore horologii ad motum diurnum fixarum regulati; e contra pars 1ma Tabulæ ostendit arcum inter fixam, & Solem medium interceptum pro tempore Culminationis fixæ, & quidem in tempore horologii ad motum diurnum Solis medii regulati. Usus autem partis utriusque hujus Tabulæ sequens est;

Usus Partis primæ Tabulæ I.

Examinare horologium pendulum ope transitus fixarum per horarium, aut per Culminationes, num illud motu medio incedat, an secus?

Hæc methodus innititur pluribus Observationibus, (seu eæ sint continuæ, seu interruptæ) appulsuum fixæ alicujus ad eundem circulum horarium, seu ad idem punctum fixum. Quapropter ad hoc examen instituendum satis erit, si in muro quocunque solido, & immobili affigatur solide tubus lamineus vitris opticis instructus, in cujus primæ lentis foco fila habeantur ad angulum rectum se intersecantia; longitudo tubi sufficiens erit, si sit unius pedis, quamvis suadendum, ut si majoris longitudinis & augmenti haberi possit, is præcipue eligendus sit, ut habeatur celeritas major motus fixæ per campum tubi atque per filum verticale; suadendum præterea, ut eligantur fixæ, quæ circa æquatorem sitæ sunt, ob

eandem causam celeritatis motus, qua obtenta appulsus accuratiores obtineantur, ut exercitatis Astronomis constat.

Hujusmodi tubo ad stellam aliquam insignem prope Æquatorem sitam directo, & firmato observentur ad horologium momenta, dum fixa ad filum verticale medium appellit, per dies aliquot, sive continuos sive interruptos; tum conferantur differentiæ appulsuum hujus fixæ, cum differentiis Culminationum in Parte Ima Tabulæ Imæ propositis; & illico patebit, num horologium motu medio incedat, an secus? Si enim differentiæ observatæ, cum differentiis Tabulæ conveniant exacte, horologium etiam exacte ad motum medium regulatum est: si vero differentiæ observatæ majores sint; quam Tabulæ I. horologium retardat, si contra differentiæ observatæ minores sint, quam Tabulæ Imæ, horologium accelerat & quidem ea quantitate, quæ est proportionalis Revolutionibus fixarum in Tabula signatis. Quodsi vero horologium jam retardet, jam acceleret, horologium ad Observationes Astronomicas haud aptum censendum est, si scilicet irregularis hic motus alia ex causa oriatur, quam a differentia caloris & frigoris.

Usus Partis secundæ Tabulæ I.

Ad usum hujus partis secundæ supponitur, haberi bina horologia, unum, quod ad motum medium Solis, alterum ad motum diurnum fixarum, seu Revolutiones fixarum regulatum sit; dicitur autem horologium ad motum fixarum regulatum, cujus indices accurate indicant horam 24tam (& quidem constanter) ab una Revolutione fixæ ad alteram ejusdem fixæ.

Ad hujusmodi horologium ad tempus fixarum regulatum facile est examinare horologium ad tempus medium incedens etiam sine ulla Observatione, seu fixarum, seu Solis. Nam si pro tempore, quo horologium medio tempore incedens signat horam 24. attendatur, quisnam numerus horarum, minutorum primorum, & secundorum ab horologio fixarum indicetur, & eadem operatio die sequenti, aut pluribus aliis repetatur, & si reperiatur differentias esse easdem, quas indicat pars secunda Tabulæ I. dubium esse nequit, horolo-

gium motu medio incedens recte esse regulatum) contra vero si differentiæ discrepent.

A. 1796. die 1. Januarii dum horologium medio tempore incedens signabat horam 24. 0′. 0″. horologium fixarum signabat horam 8. 45′. 20″. die 31. Januarii idem horologium medium signabat 24. 0′ 0″ horologium fixarum signabat 6. h. 47′. 3″.; est autem differentia inter 8. 45′. 20″. & 6. 47′. 3″ = 1. h. 58′. 17″. quæ differentia cum sit eadem, cum differentia partis secundæ Tabulæ I. pro diebus 30. intercedentibus inter 1. & 31. Jan. horologium medio motu incedens, recte constitutum intelligitur. Atque hinc patet usus maximus, & commodissimus partis hujus secundæ, si bina habeantur horologia, unum ad tempora fixarum, alterum ad tempus medium regulatum: hac enim ratione, si indices horologii secundum tempus medium incedentis, regulati semel erant, ut in meridie exacte tempus medium indicaverint, semper indagari poterit etiam tempore nubilo, dum nec cum Sole nec cum fixis Observationes institui possunt, an horologium tempore medio incedat nec ne; præterea Observationes ad hoc horologium factæ optime sine aliis Observationibus Solis, vel fixarum reduci poterunt ad tempus verum, ut facile patet. Methodus hæc perquam utilis erat, iis Observatoribus, qui ob transitum veneris per discum Solis A. 1769. in partibus Borealibus Lapponiæ observandum, hiemem in suis stationibus exigere debebant; quo tempore per unum, alterumve mensem Sol nunquam oritur, atque continuo infra horizontem versatur: in hujusmodi locis aliud medium non habetur, quam per fixas regulare horologium motu medio incedens, quorum Observatorum gratia etiam hæc Tabula adjecta fuit.

Usus Tabulæ III.

Tabula hæc servit ad tempora conjunctionum lunæ cum sole aut cum fixis, aut quarumcunque demum phasium exactius determinanda e positionibus lunæ, quæ in Ephemeridibus de 12 in 12 horas supputatæ sistuntur. Postquam enim ope motus semidiurni lunæ, aut, si de Sole aut planetis quæstio sit, ope motus semidiurni relativi indagatum est in tempus quæsitum phaseos lunaris; hoc ipsum e Tabula III. cum

differentia diurna in fronte, & cum horis paullo ante inventis in latere corrigendum est juxta præceptum tabulæ subjectum.

Ex gr. quæratur 1796. mense Augusto tempus Plenilunii. Dies, ubi sol & luna hoc mense 6 Signis a se distant, est 18. Excerpatur ad hanc diem motus semidiurnus ☉ = 28′. 53″; motus semidiurn. lunæ = 6°. 18′. 0″. Capiatur differentia longitudinum ☉ & lunæ pro meridie 18 Aug. = 2°. 9′. 33″; dicaturque differentia motuum semidiurnorum 5°. 49′. 7″ ad 12 h. uti differentia longitud. 2°. 9′. 33″; ad tempus Plenilunii quam proximum 4h. 27′. 11″. 4. Cum differentia secunda nostro in casu sit 3′. 2″; tabula III correctionem ad tempus paullo ante inventum 38″ præbet, addenda ad illud, cum differentiæ primæ crescant. Erit igitur tempus Plenilunii correctum. 4h. 27′. 49″. 4.

Aliud Exemplum. Quæratur 1796. mense Julio tempus Primæ Quadraturæ, quæ incidit in diem 11. Motus semidiurnus ☉ est 28′. 37″; lunæ 6°. 18′. 50″; eorundem differentia 5°. 50′. 13″; differentia longitudinum utriusque in meridie 5°. 6′. 1″. Instituta proportione, dicendo; 5°. 50′. 13″. ad 12 h. uti 5°. 6′. 1″. ad 10 h. 28′. 50″; invenitur tempus incorrectum. Cum motus semidiurnus sit decrescens, & differentia secunda 4′. 49″; Tabula III. correctionem temporis — 28″ subministrat, juxta præceptum a tempore paullo ante invento subtrahendam. Erit ergo tempus quæsitum 10h. 28′. 22″.

Usus Tabulæ IV.

Longitudines lunæ, & latitudines, in Ephemeridibus nostris in duodenas horas supputatæ, sufficiunt quidem ad positionem lunæ per partes proportionales quam proxime determinandam pro quavis hora intermedia. Cum tamen hac methodo in positione definita error nonnunquam unius minuti latere possit, huic Tabula IV. medebitur ope differentiarum secundarum. Nam cum per differentias primas ope partium proportionalium locus lunæ investigatur, motus semidiurnus supponitur uniformis, quod nonnisi rarissime locum habere potest.

Cum quæritur ad datum tempus longitudo aut latitudo lunæ; sumantur ex Ephemeridibus quatuor longitudines, videlicet duæ, immediate datum tempus antecedentes, & duæ, subsequentes; capianturque differentiæ primæ, quæ motum semidiurnum repræsentant, & demum differentiæ secundæ.

Per differentiam primam ope partium proportionalium invenitur motus lunæ dato tempori respondens, quem hic motum uniformem appellare placuit, ad Tabulæ IV. titulos intelligendos. Cum differentia secunda, quæ dato tempori respondeat, in fronte, & cum dato tempore in latere excerpatur e Tabula IV. correctio motui uniformi juxta præceptum Tabulæ applicanda; & habebitur motus correctus, qui longitudini vel latitudini pro meridie vel media nocte proxime antecedente supputatæ applicatus dat positionem lunæ exactam ad tempus propositum.

Exempl. I. Quæratur 1796. die 10. Jun. hor. 5. m. 30. longitudo lunæ. Longitudines ex Ephemeridibus excerptæ ita se habebunt:

Die			Long.	Differ. I.	Differ. II.
9	—	♌	18°56′18″	6°58′ 2″	6′ 14″
10	—	♌	25 54 20	6 51 48	6 23
—	—	♍	2 46 8	6 45 25	
11	—	♍	9 31 33		

Ope differentiæ primæ 6°. 51′. 48″. obtinetur ad tempus datum motus uniformis 2°. 41′. 14″. 5. Cum differentia II. 6′. 18″ dato tempori respondente in fronte, & cum tempore dato in latere invenitur correctio + 46″. 5. motui uniformi, cum motus semidiurnus decrescat, addenda; unde habebitur motus correctus 2°. 42′. 1″; qui ad longitudinem lunæ diei 10 in meridie additus dat longitudinem lunæ quæsitam ♌ 28°. 36′. 21″. 0. Diximus supra, differentiam II. accipiendam dato tempori respondentem, propterea quod ea ratione longitudo lunæ plerumque tam exacta obtineatur, ac si etiam differentiarum tertiarum ratio habeatur.

Si datum tempus sit t; ejus complementum ad 12 horas c; & differentia secunda d″; expressio hujus correctionis erit $= \frac{c\ t\ d''}{2.\ 12^2}$; seu Quadratum 12. hor. ad semidifferentiam secundam: uti productum dati temporis in ejus complemen-

tum: ad correctionem quæsitam: atque juxta hanc expressionem Tabula IV. constructa est.

Exempl. II. Quæratur die 15 Sept. 1796. pro hora 3. m. 48. mane longitudo lunæ. Erunt longitudines Ephemeridum supputatæ.

Die					Diff. I.			Diff. II.	
15	♓	2°	24′	44″	6°	26′	39″	4′	38″
—		8	51	23	6	31	17	4	30
16		15	22	40	6	35	47		
—		21	58	27					

Ope differentiæ primæ 6°. 31′. 17″. eruitur pro tempore dato motus uniformis 2°. 3′. 54″. 4. Cum differentia secunda 4′. 35″½ in fronte, & cum dato tempore in latere obtinetur correctio — 29″. 2, a motu uniformi, cum motus semidiurnus crescat, subtrahenda. Unde motus correctus est 2°. 3′. 25″. 2; atque adeo longitudo quæsita ♓ 10°. 54′. 48″. 2.

Exempl. III. Quæritur 1796. die 12. Maji mane h. 4. m. 30. latitudo lunæ. Ex Ephemeridibus habentur.

Die	Lat.				Diff. I.		Diff. II.	
12	1°	48′	35″	B.	34′	23″	2	41
—	2	22	58		31	42	2	38
13	2	54	40		29	4		
—	3	23	44					

Ex motu semidiurno 31′. 42″ invenitur motus uniformis dato tempori respondens 11′. 53″. 2; & Tabula IV. ex differentia secunda 2′ 40″ correctionem + 18″. 3 subministrat, motui uniformi addendam, quia differentiæ primæ descrescunt. Unde latitudo quæsita erit 2°. 35′. 9″. 5. B.

Exempl. IV. Quæritur 1796 die 27 Jul. hor. 6. vesp. latitudo lunæ. Ex Ephemeridibus habentur.

Die	Lat.				Diff. I.		Diff. II.	
—	5°	3′	58″	A.	11′	56″	4	20
27	4	52	2		16	16	4	12
—	4	35	46		20	28		
28	4	15	18					

Inde colligitur motus uniformis dato tempori respondens 8′. 8″; & correctio — 32″ ſubtrahenda; atque adeo latitudo quæſita 4°. 44′. 26″ A.

USUS TABULÆ V.

Exhibet hæc refractionem actualem Pariſiis, & ad *Caput bonæ ſpei* uſurpandam, quam methodo & ſingulari, & plane operoſa (quemadmodum legere eſt in *Fundamentis Aſtronomiæ*) ex obſervationibus correſpondentibus juxta formulam *D. Clairaut*, ſupputavit *D. l' Abbé de la Caille*; uſum ejus quod attinet, ſola inſpectione Tabulæ innoteſcit.

USUS TABULÆ VI.

Complectitur hæc Tabula parallaxes Solis ad ternos altitudinis ⊙ gradus ſupra horizontem, quæ ad *apparentem* altitudinem addenda eſt, ſi quæratur *vera*, ſubtrahenda contra, ſi ex *vera* quæratur *apparens*; eſt hæc Tabula juxta Obſervationem Tranſitus ♀ per diſcum ⊙ die 3. Junii 1769 ſupputata.

USUS TABULÆ VII.

Hæc (ut titulus Tabulæ notat) augmentum Diametri horizontalis Lunæ, in Hypotheſi telluris ſphæricæ, complectitur, ad diverſos altitudinum gradus ſupra horizontem.

Quæritur ex. gr. die 21. Jan. 1796. quo Luna eſt perigæa, diameter apparens Lunæ culminantis hora 9. m. 31. cujus altitudo apparens habetur 62. gr. 29′, ſupra horizontem Viennenſem. Diameter horizontalis Lunæ pro meridie die 21. Jan. 32′. 54″. differentia nulla, quare pro hora 9. 31′. die 21. Jan. habetur Diameter horizontalis Lunæ 32′ 54″, cujus ope, & ope datæ altitudinis e Tabula VII. reperitur augmentum 31″. 0. quare diameter apparens Lunæ ſub altitudine 62. gr. 29′. erit 33′. 25″.

USUS TABULÆ VIII.

Usus hic est, ut data parallaxi *horizontali* Lunæ, quam in his Ephemeridibus *ad* singulos dies exhibeo, inveniatur parallaxis *altitudinis apparentis* Lunæ supra horizontem in hypoth. sphærica. Usum ejus vide in appendice ad Ephem. Anni 1764. seu in Tabulis lunar. ibidem editis.

Parallaxis altitudinis apparentis Lunæ in hypothesi sphærica ope Trigonometriæ hac analogia reperitur: *Ut sinus totus, ad sinum complementi altitudinis apparentis; ita parallaxis horizontalis* (pro dato tempore altitudinis) *ad parallaxim altitudinis apparentis*. Hac methodo constructa habetur Tabula VIII. parallaxeos Lunæ altitudinis.

Quod si desideretur parallaxis altitudinis veræ, necesse est, veram altitudinem prius reducere ad apparentem hac analogia: *Ut sinus totus ad sinum complementi altitudinis veræ, ita parallaxis horizontalis ad certam quandam parallaxim.* Dein fiat sequens analogia:

Ut sinus totus, ad sinum complementi altitudinis veræ correctæ per parallaxim paulo ante inventam, ita parallaxis horizontalis ad parallaxim veram quæsitam.

USUS TABULARUM IX, X, XI, & XII.

Usus harum Tabularum hic habetur: Ope Tabulæ IX. convertitur tempus primi mobilis in partes circuli æquatoris, intelligitur autem per tempus primi mobilis revolutio integra æquatoris, seu graduum 360, quod tempus cum Revolutione alicujus fixæ ad eundem meridianum, congruit, ita, ut si 360. gradus, seu tota Revolutio, dividantur per 24. horas, uni horæ respondeant gradus 15. & ita porro. Usus hujus Tabulæ amplus est, dum nempe (ex dato tempore) quæruntur gradus circuli æquatoris.

Tabula X. priori respondet, ope cujus dati gradus æquatoris convertuntur in tempus primi mobilis, ita, ut quinde-

cim gradus dent unam horam; est hujus usus amplissimus dum partes æquatoris in tempus convertendæ sunt.

Tabula XI. exhibet conversionem graduum æquatoris in tempus medium, de quo, principio hujus introductionis actum: quare, cum integræ Revolutioni æquatoris, seu 360. gradibus nonnisi 23. h 56. m. & 4. s. respondeant temporis medii, gradibus 15. æquatoris non hora sed 59 min. & 50. s. respondent, & ita porro.

Tabula denique XII. contra conversionem temporis medii in gradus æquatoris continet.

USUS TABULARUM XIII, XIV. XV.

Accuratam temporis meridiei correctionem, quod ex altitudinibus Solis correspondentibus elicitur, necessariam esse, theoria Solis edocet; cum enim Declinatio Solis singulis, ut ita dicam, momentis varietur vel in augmentum vel in decrementum, intervallum temporis inter altitudinem Solis antemeridianam, & inter eandem tempore pomeridiano acceptam (extra solstitia) bifariam divisum, & Observationis tempori antemeridiano additum, vel a pomeridiano subtractum, nequaquam dabit tempus meridiei veri, seu centri Solis culminantis: Æquatione itaque opus habent tempora hujusmodi, pendente a varia Solis declinatione, & elevatione poli.

Tabula XIV. ad latitudinem loci 45. graduum a *Cel. de la Caille* supputata est.

Ope hujus Tab. XIV. & prioris XIII. pro latitudine quavis loci, facile supputatur Tabula correctionis horæ meridiei prodeuntis ex altitudinibus Solis correspondentibus; si enim ad Logarithmos correctionum Tabulæ XIV. addantur Logarithmi tangentis datæ latitudinis loci, erunt summæ Logarithmorum, Logarithmi correctionum quæsitarum; quod ipsum per Tab. XV. præstitum est, e qua ipsas has correctiones excerpere licet, quæ tamen correctiones per Tabulam XIII. adhuc coæquandæ erunt.

USUS TABULÆ XVI.

Continet hæc Tabula, ut titulus notat, correctiones horæ meridianæ e correspondentibus ☉ altitudinibus prodeuntis, ad elevationem poli Viennensis 48. gr. 12′. 36″. methodo ante dicta, supputata, & per Tabulam XIII. coæquata; in ejus usu longitudinem Solis ad semigradum novisse sufficit:

EXEMPLUM.

Supponuntur altitudines correspondentes Solis die 7 Aprilis 1795. Viennæ in Observatorio Cæsareo-Regio acceptæ. Sol hac die versatur in signo ♈ 18. gr. 20. m. Sit itaque observata

	H. M. S.	Interv. temporis H. M. S
Altit. limbi ☉ super 32. gr. mane	8.46.24.	
Altit. limbi ☉ super 32. gr. a mer	3.15.46.	- - 6.29.22.
Tempus observat. mane -	8.46.24.	Dimid. 3.14.41.
Dimidium intervallum +	3.14.41.	quæ est distantia horaria Solis a meridiano.
Meridies incorrectus - -	12.1.5.	
Correctio Tab. XVI. pro longitudine Solis & pro distantia horaria - —	16″ 34.	
mer. verus cor.	$12^h.0'.48''66$:	

Certitudinis causa 8. 10, vel 12. correspondentes altitudines Solis determinantur.

TABULAS

Amplitudinum ortivarum & occiduarum, item ortus & occasus apparentis & earum usum vide in Ephem. ab. An. 1757. ad An. 1763.

USUS TABULÆ XVII.

Tabula hæc, ampliſſimi uſus, complectitur præcipuorum locorum telluris differentias meridianorum tam in partibus circuli maximi, quam in tempore inter meridianum Obſervatorii Cæſareo-Regii Vindobonenſis, item latitudines ſeu elevationes poli, cuivis loco reſpondentes; Aſteriſmus (*) deſignat differentiam meridianorum, & elevationem poli e pluribus, & certis Aſtronomorum Obſervationibus correſpondentibus determinatam, hoc vero ſignum (†) indicat haberi tantum ex Obſervationibus dubiis, aut minus certis, ſi nullum adſit ſignum, noſcitur hujusmodi differentiam, aut latitudinem loci e nullis adhuc Obſervationibus aſtronomicis ſupputatam, ſed æſtimatione duntaxat, aut e Catalogis Geographorum determinatam.

PROBLEMA

Data hora quacunque Viennæ, invenire in dato loco quovis (qui in Tab. XVII. habetur) horam reſpondentem horæ Viennenſi.

Excerpatur e columna 2da dati loci differentia meridianorum in tempore, & ſi datus locus ſit ad occidentem, quod indicant lit. occ. ſubtrahatur hæc differentia a data hora Viennenſi, ſi vero ſit ad orientem, addatur; ſumma, vel differentia dabit horam quæſitam pro dato loco.

EXEMPLUM.

Quæritur, dum Viennæ eſt hora 9. mane, quænam ſit hora Pariſiis? cum Pariſii occidentem verſus differant a meridiano Viennenſi in tempore juxta hanc Tabulam 56. m. 10. s. hæc ſubtracta ab hora nona relinquunt 8. h. 3. m. 50. s: quæ eſt hora matutina Pariſiis, dum Viennæ eſt hora 9na mane.

Quod ſi differentia meridianorum ſit orientalis, hæc ad datam horam Viennenſem addita, dabit horam pro loco dato quæſitam.

EXEMPLUM.

Initium Elipsis ☽ totalis 1790. die 28 April. contigit Viennæ hora 11. m. 15. s. 50. vespere, quæritur, qua hora contigit initium hujus Eclipsis Petropoli in Russia? E Tabula XVII. differentia meridianorum est 55. m. 50. s. orient. hæc minuta addita ad tempus Viennense, dant tempus civile Petropoli die 29 0. h. 11. m. 40. s. pro initio Eclipseos mane.

PROBLEMA.

Data hora quavis loci alicujus, invenire, quæ sit hora Viennæ respondens.

Resolutio est eadem, quæ antecedentis Problem. sed mutatis titulis, id est, si loci dati differentia meridianorum sit orientalis, hæc differentia *subtracta* a tempore loci dati exhibet horam, seu tempus Viennense; & contra, si differentia meridianorum loci dati sit occidentalis, *addita* ad tempus loci dati, exhibet horam & tempus Viennense respondens. Ope hujus, & antecedentis Problematis usus harum Ephemeridum redditur universalis, adeo, ut his Ephemeridibus perinde, ut Viennæ, in omnibus totius orbis locis uti liceat ad Observationes instituendas. Nam ex. gr. locus Solis in Ecliptica, dum Parisiis Sol culminat, (ob differentiam meridianam occidentalem 56. m. 10. s. in tempore) revera idem est, qui Viennæ hora 12. m. 56. s. 10. cum hora 12ma Parisina respondeat horæ Viennensi 12. m. 56. s. 10. Hinc ad usum tum harum Ephemeridum, tum Problematum supra adductorum pro loco quocunque, primum in horam Viennensem, horæ loci dati respondentem, inquirendum ope hujus Problematis, qua reperta, si pro hora Viennensi inventa, (eadem methodo Problematum) inquiratur in loca & motum Astrorum; erunt ea ipsa loca, is ipsus motus quæsitus, qui pro tempore loci dati terrestris cujuscunque desideratur.

USUS TABULÆ XVIII.

De harmonia Thermometrorum.

Pagina 178. harum Ephemeridum Tabula proponitur harmonica, seu comparativa Thermometrorum, usu receptorum, scilicet *D. D. Reaumur, De l'Isle, Fahrenheit* & *de la Hire*; comparantur autem tres reliquæ scalæ cum scala *Reaumuriana* in prima columna proposita, quæ pro termino primo, seu initio divisionis habet o· seu punctum initii congelationis, & pro altero termino punctum ebullitionis aquæ fontanæ stante Barometro sub altitudine 28. digit. Rhenlandicorum, seu 27½. Parisiens. ubi ponitur numerus 80., nempe intervallum ab initio congelationis ad punctum ebullientis aquæ dividitur in partes 80 æquales, & per ejusmodi partes æquales continuatur scala tam infra punctum o quam supra numerum 80. Habentur etiam Thermometra Reaumuriana, quorum intervallum a puncto congelationis ad punctum ebullientis aquæ divisum est in partes 90. æquales, sed hæc scala minus usitata habetur.

Scala *D. de l'Isle*, aliam obtinet Divisionem; pro puncto scilicet ebullientis aquæ ponitur zerus seu o, atque intervallum a puncto ebullientis aquæ ad punctum congelationis dividitur in partes 150., vel ut habet Tab. XVIII. pagina 178. in partes 153., & ex hujusmodi partibus sursum, deorsumque continuatis tota scala definitur.

Scala *D. Fahrenheit*, pro numero puncti ebullientis aquæ habet 212. & pro puncto congelationis numerum 32, hinc spatium inter hæc bina puncta in partes æquales 180. divisum est, quapropter gradus Reaumuriani 80. æquantur 150. De L'Islianis, & iidem 80. æquantur 180. gradibus Fahrenheitianis. Hinc vero habentur sequentes Rationes, scilicet scala *Reaumurii* ad *D. L'Isle* ut 80. ad 150. vel 153. seu 8. ad 15. ejusdem *Reaumurii* ad Fahrenheit ut 80. ad 180. seu 4. ad 9. facilis itaque foret harum scalarum reductio, si initia Divisionis horum Thermometrorum ab eodem puncto communi inchoarentur, sed ut vidimus, ubi *D. Reaumur* habet o, ibi *de L'Isle*, ponit 150. vel 153. & contra, ubi De *L'Isle* ponit o, ibidem *Reaumur* habet numerum 80. Item puncto *Reaumuriano* = o respondet gradus *Fahrenheitianus*

32. atque ex hac caufa reductiones difficiliores redduntur Hinc, fi quis five Tabulam univerfalem harmonicam reductionis conftruere, five dato gradu quovis ex his Thermometris nofcere velit alterius Thermometri gradum, fequentibus uti poterit formulis fimplicibus.

Reductio graduum Thermometri Reaumuriani ad gradus Thermometri D. de l'Isle.

Cum Ratio Thermom. *Reaumuriani* ad *l'Isle*, fit ut 80. ad 150. v. 153. fed progres. divifion. contrario.

Si ponatur D. *Reaumur* 80 $= a$
D. *de l'Isle* 153 vel 150 $= b$
Datus gradus *Reaumurianus* $= c$
Quæfitus *de L'Islianus*..... $= x$

Erit

Dato gradu, *Reaumurii* a o. ad 80. fur. ver. $= b - \frac{c}{a} = x$

Et dato gradu fupra 80. furfum. verfus.. $= \frac{bc}{a} - b = x$

Et dato gradu infra o. deorfum verfus.. $= \frac{bc}{a} + b = x$

Reduc. Thermom. D. de l'Isle ad Reaumurianum

Sit ut ante D. *Reaumur* 80 $= a$
D. *de l'Isle* 153 vel 150 $= b$
Gradus Thermom. *de l'Islianus* $= c$
Quæfitus Reaumurianus ...... $= x$

Erit dato gradu a 150 vel a 153 ad o......... $\frac{\overline{b-c} \times a}{b} = x$

Et dato gradu fuper o.......................... $\frac{\overline{b+c} \times a}{b} = x$

Et dato gradu defcendendo infra 150......... $\frac{\overline{c-b} \times a}{b} = x$

Reductio Thermom. Reaumurii ad Fahrenheitii.

Ratio *Reaumuriani* ad *Fahrenheitii* est, ut 4. ad 9. & puncto *Reaumurii* = o respondet *Fahrenheitii* numeris 32. igitur

Si sit .... $4 = a$
$9 = b$
$32 = d$
Datus Reaumurii gradus .... $= c$
Quæsitus Fahrenheitii .... $= x$

Erit dato gr. *Reaum.* a o ad 80 surs. vers. $\frac{bc}{a} + d = x$

Et dato gradu infra o .... $= d - \frac{bc}{a} = x$

Reductio Fahrenheitii ad Reaumurianum.

Si ut ante .... $4 = a$
$9 = b$
$32 = d$
Datus Fahrenheitii .... $= c$
Quæsitus Reaumurianus .... $= x$

Erit a gradu *Fahrenheitii* 32 surs. vers. $= \frac{c-d \times a}{b} = x$

Et a gradu 32 deorsum versus .... $\frac{d-c \times a}{b} = x$

Scala Thermometri *D. de la Hire*, & singularis est, & nunc jam usu fere abolita; cæterum quia ad hoc Thermometrum complures habentur Observationes factæ Parisiis in Observatorio Regio, hanc quoque in Tab. XVIII. Pag. 178. relatam videre est, ejusque ad Reaumurii reductionem novisse juverit; sciendum itaque singularis hujus scalæ initium divisionis, seu zerum respondere puncto frigoris Reaumuriano 18 infra o. quod faciendi forsitan occasionem præbuit *D. de la Hire* ingens gradus frigoris Anno 1709. Parisiis observatus, cui in scala Reaumurii respondet fere gradus 16 infra o; hoc sumpto initio divisionis, gradus *De la Hiriani* ita continuantur sursum versus, ut finiantur in gradu 83. 3. responden-

te in ſcala Reaumurii 30 ſupra 0, & 0 Reaumurii reſpondeat gradus *De la Hirianus* 31. 3. Hinc ratio ſcalæ Reaumurii ad *De la Hire* habetur, ut 30 ad 52. ſeu 15. ad 26. Inde porro eruitur gradui ebullientis aquæ Reaumurii 80*mo* reſpondere *De la Hire* gradum 170. 0.

Reductio autem graduum Reaumurii ad *De la Hire* & viciſſim, iisdem formulis obtinetur, quibus ſupra uſum in reductione Reaumuriani ad Fahrenheitianum docuimus, ſi ſcilicet ponatur $a = 15. 0.$ item $b = 26. 0.$ & $d = 31. 3.$

Reductio ceterorum Thermometrorum, quæ licet diverſas habeant ſcalas, initium tamen harum ſcalarum idem habent, quod *D. Reaumur*, reductionum formulis non eget, cum ſimplice regula aurea abſolvatur; ſic quia *Celſus*, & *Chriſtinus*, initium diviſionis ſumunt a puncto congelationis *Reaumuriano* = 0, & usque ad punctum ebullitionis aquæ partes habent 100. erit ratio conſtans Reaumuriani ad *Celſii* & *Chriſtini* ut 80. ad 100. ſeu 8. ad 10. aut 4. ad 5. & viciſſim. Scala *D. Martini* & de *Bergen* a puncto congelationis 0. usque ad ebullientem aquam numerat 180. ergo ratio conſtans Reaumurii ad *D. D. Martini*, & de *Bergen* eſt, ut 80 ad 180. ſeu 4. ad 9. & viciſſim. Eodem modo *D. Hoffmann* a 0. ad punctum ebullientis aquæ habet partes 150, ergo ratio conſtans *D. Reaumurii* ad *D. Hoffmann* eſt, ut 80. ad 150. ſeu 8. ad 15. & viciſſim.

Harum formularum ope facile conſtruitur Tabula univerſalis harmonica Thermometrorum omnium, cujusmodi pars aliqua exhibetur in Tabula XVIII. Pag. 178. quæ e Tabulis *D. de la Lande* deſumpta eſt.

USUS TABULÆ XIX.

Tabula hæc eſt ſupputata juxta mentem *D. de la Caille* & aliorum; ſupponendo ſcilicet bina. Prima ſuppoſitio eſt, quod mutata Barometri altitudine eadem ratione mutetur quoque refractio, ita quidem, ut ſi Mercurius in Barometro uno pollice infra 28. pollices Pariſinos deſcendat, refractio quoque minuatur $\frac{1}{28}$, augeatur contra $\frac{1}{28}$; ſi altitudo Mercurii uno pollice ſupra 28. aſcendat. Secunda ſuppo-

ſitio eſt: quod mutato Thermometro Reaumuriano 10. partibus, refractio queque mutetur $\frac{1}{27}$., media autem refractio ponitur ſtante Thermometro 10. gradus ſupra o uti etiam media refractio ſupponitur ſtante Barometro ad 28. pollice Pariſinos. Uſus autem hujus Tabulæ, quæ ad partes pedis Viennenſis nobis uſitati conſtructa eſt, ſequens eſt:

Dum ſideris cujuspiam altitudo apparens ope inſtrumenti Aſtronomici capitur, ſimul una videndum eſt, quamnam altitudinem id temporis habeat Barometrum in partibus pedis Viennenſis, itemque quemnam gradum indicet Thermom Reaumurii in umbra poſitum. Ex. gr. Sit altitudo apparens ſideris ope quadrantis capta 30. ſupra horizontem, ſit altitudo Barometri in partibus pedis Viennenſis 28. dig. 2. gradus Thermometri Reaumuriani ſit 15. quæritur refractio vera ſideris.

I. Ope altitudinis apparentis 30°. inquire in Tab. V. pag. 152. Refractionem mediam, quam reperies 1′. 54″. 4 æqualem 1144. decimis.

II. Ope altitudinis Barom. 28. dig. 2. in fronte ſiniſtræ Tab. XIX. exquire diviſorem refractionis huic altitudini reſpondentem, quem reperies - 42.

III. Per hunc diviſorem — 42 divide refractionem mediam in decimas reductam, nempe 1144., & habebis quotum — 27. quem mediæ refractioni 1144. applicabis *addendo* vel *ſubtrahendo*, prout diviſoris ſignum fuerit + vel —, in noſtro exemplo eſt —; igitur 1144. — 27. = 1117. erit refractio primo correcta.

IV. In parte dextra Tabulæ XIX. ope altitudinis Thermom. 15. gradus, quære novum diviſorem refractionis, quem invenies — 54.

V. Per hunc diviſorem divide refractionem primo correctam 1117, & repertum quotum 20. *Adde* vel *ſubtrahe* a refractione primo correcta, prout diviſor fuerit + vel —, in noſtro exemplo evadit quotus —; ergo 1117. — 20. = 1097, ſeu 1′. 49″. 7. quæ vera ſupponitur refractio

respondens altitudini 30. graduum, itemque altitudini Barometri 28. dig. 2. Vien. & altitudini Thermometri Reaumuriani 15. graduum.

Juverit hic jam Tabulæ hujus XIX. usum indicare universalem; scilicet evenire potest, ut Observator Astronomus utatur Barometro juxta alium quemvis pedem usitatum, puta Parisinum, Londinensem, Rhenanum &c. constructo. 2do Thermometro quoque utatur alio quovis ex gr. D. Fahrenheitii, De la-Hire, aut D. de L'Isle, quorum harmoniam in Tabula XVIII. pag. 178. exhibeo & ampliorem usum pag. 218. explico. Igitur ad usum universalem Tab. XIX. necesse erit I. altitudinem datam Barom. in partibus pedis cujusvis reducere ad partes pedis Viennensis juxta Tabel. infra positam.

2do Altitudo quoque Thermom. alterius cujusvis reducenda erit ad altitudinem Thermom. Reaumuriani, quibus reductis problema hoc solvitur eodem modo, ut exemplum supra datum resolutum est. Sic

Ex. gr. Sit altitudo sideris apparens 30°. sit altitudo Barometri in partibus pedis Parisini 27. dig. 4. sit altitudo Thermometri Fahrenheit. 66. erit igitur altitudo Barometri in partibus pedis Viennensis 28. dig. 2. gradus Thermometri Reaumuriani 15; adeoque refractio vera 1'. 49''. 7. ut supra.

Ad usum hujus Reductionis pedum diversorum ad partes pedis Viennensis sequentem proponimus Tabellam, in qua habetur *Ratio* pedum usitatorum in partibus pedis Viennensis, qui supponitur divisus in partes 100000.

Pes Alexandrin	112962	Pes Mediolan..	188400
Arabicus..	84723	Moraviæ....	105700
Argentoratenſ.. ..	91544	Neapolit. palm....	82889
Bavaricus..	92331	Norimbergenſ.. ..	96109
Bohemicus..	93767	Pariſinus..	102764
Bononienſis..	120319	Rhenoland..	99326
Caſtiliæ ulna......	264760	Romanus vet	93487
Danicus..	100166	— modern..	94232
Florentinus	174195	Sileſiæ.......... ..	91550
Græcorum vet....	97382	Sinenſis..........	101146
Hebræor. Cub....	170131	Suecicus..	93951
Lugdunenſis B....	99326	Taurinenſis..	162281
Londinenſ..	96460	Vindobonenſis.. ..	100000

EXPLICATIO TYPI LUNARIS.

Typus Lunæ his inſertus Ephemeridibus librationes omnes exprimit. Ad commodum hujus typi uſum maculas numeris & litteris inſignivi, quibus reſpondent nomina tum a P. Ricciolo S. J. tum ab Hevelio impoſita; & hodiernis Aſtronomis uſitata utraque; his quædam aſteriſmo notata, adjecta ſunt; En horum Elenchum.

Nomina Macularum insignium Lunæ Plenæ secundum Selenographiam P. Riccioli S. J. & Hevelii, eo ordine disposita, quo in Eclipsibus centralibus in umbram terræ immergi videntur.

Secundum P. Ricciolum.	Secundum Hevelium.
1 *Ricciolus*, *S. J.*	1 - - - - - - - -
2 *Grimaldus*, *S. J.*	2 *Palus Maræotis.*
3 *Hevelius.*	3 *Stagnum Miris.*
4 *Cavalerius*	4 *Mons Pherme.*
5 *Sirsalis*, *S. J.*	5 *Mons Climax.*
6 *Crügerus.*	6 *Fontes amari.*
7 *Eichstadius.*	7 *Mons Acabe.*
8 *Cardanus.*	8 - - - - - - - -
9 *Galilæus.*	9 *Mons Audus.*
10 *Halleyius.* *	10 *Mons Thambes.*
11 *Linemanus.*	11 *Peninsula Mar. Syrtici.*
12 *Schmelzerus*, *S. J.* *	12 - - - - - - - -
13 *Reinerus.*	13 - - - - - - - -
14 *Marius.*	14 *Mons Germanicianus* <
15 *Zupus*, *S. J.*	15 *Mons Ajax.*
16 *Vieta.*	16 *Mons Casius prope montem Pharan.* <
17 *Flamsteedius.* *	17 *Mons Mampsarius.*
18 *Fontana.*	18 *Mons Sacer.*
19 *Keplerus.*	19 *Loca paludosa.*
20 *Aristarchus.*	20 *Mons Porphyrites.*
21 *Derienes*, *S. J.*	21 *Insula Lea.*
22 *Gassendus.*	22 *Mons Cataractes.*
23 *Schikardus.*	23 *Mons Tropicus.*
24 *Morinus.*	24 *Fretum Sirbonicum.*
25 *Volsius*, *S. J.*	25 - - - - - - - -
26. *Lansbergius.*	26 *Insula Maltha.*
27 *Reinboldus.*	27 *Mons Neptunus.*
28 *Phocilides.*	28 *Mons Tadnos.*
29 *Capuanus.*	29 *Mons in Reg. Cassionis.*
30 *Molerius.*	30 *Insula Zacbintus*,
31 *Cleostratus.*	31 - - - - - - - -
32 *Copernicus.*	32 *Mons Æthna.*
33 *Campanus.*	33 *Insula Lethoa.*

Secundum P. Ricciolum.		Secundum Hevelium.	
34	*Cichus.*	34	*Insula Didymæ.*
35	*Bullialdus.*	35	*Insula Creta.*
36	*Bayerus.*	36	- - - - - - - - -
37	*Rheticus.*	37	*Pars Lacus Herculei.*
38	*Scharpius.* *	38	*Atlas minor.*
39	*Pitheas.*	39	*Insula Sardinia.*
40	*Rostius.* *	40	*Insula Melos.*
41	*Harpalus.*	41	*Insula sinus Hyperborei.*
42	*Munosius.*	42	*Insula Carpathes.*
43	*Stadius.*	43	*Lacus Herculeus.*
44	*Dominicus Maria.*	44	*Lacus Herculeus.*
45	*Helicon Cyzicenus.*	45	*Insula Erroris.*
46	*Pythagoras.*	46	- - - - - - - - -
47	*Scheinerus, S. J.* *	47	*Pars Vallis Hajalon.*
48	*Guillelmus Landg. Hassiæ.*	48	*Mons. Horeb.*
49	*Pitatus.*	49	*Mare mortuum.*
50	*Profatius.*	50	*Insula Rhodus.*
51	*Alpetragius.*	51	*Promontorium Ænarium.*
52	*Eratosthenes.*	52	*Insula Vulcania.*
53	*Timocharis.*	53	*Insula Corsica.*
54	*Anaximander.*	54	- - - - - - - -
55	*Bartholus, S. J.*	55	- - - - - - - - -
56	*Kircherus, S. J.*	56	*Vallis Hajalon.*
57	*Longomontanus.*	57	*Mons Anna.*
58	*Tycho.*	58	*Mons Sinai.*
59	*Blancanus, S. J.*	59	*Desertum Raphidim.*
60	*Alphonsus Rex.*	60	*Mons Masicytus.*
61	*Wolffius.* *	61	*Mons Apenninus.*
62	*Archimedes.*	62	*Mons Argentarius.*
63	*Clavius, S. J.*	63	*Desertum Evila.*
64	*Regiomontanus.*	64	*Mons Libanus.*
65	*Purbachius.*	65	*Mons Libanus.*
66	*Arzachel.*	66	*Mons Gragus.*
67	*Ptolomæus.*	67	*Mons Sipylus.*
68	*Plato.*	68	*Lacus niger Major.*
69	*Maginus.*	69	*Mons Seir.*
70	*Orontius.*	70	*Mons Hermen.*
71	*Valtherus.*	71	*Mons Thabor.*
72	*Vernerus.*	72	*Anti - Libanus.*
73	*Aliacensis.*	73	*Anti - Libanus.*

	Secundun P. Ricciolum.		Secundum Hevelium.
74	*Albategnius.*	74	*Mons Didymus.*
75	*Hyparchus.*	75	*Mons Olympus.*
76	*Hyginus.*	76	- - - - - - - -
77	*Autolicus.*	77	*Mons Montaniates.*
78	*Ariſtillus.*	78	*Mons Liguſtinus.*
79	*Aratus.*	79	*Mons Apenninus.*
80	*Timæus.*	80	*Lacus niger minor.*
81	*Anaxagoras.*	81	*Montes Hyperborei.*
82	*Apianus.*	82	*Pars Anti - Libani.*
83	*Stöfflerus.*	83	*Mons Calchaſtan*
84	*Manilius.*	84	*Inſula Besbycus.*
85	*Architus.*	85	*Scopuli Hyperborei.*
86	*Julius Cæſar.*	86	*Palus Archeruſia.*
87	*Sulpicius Gallus.*	87	- - - - - - - -
88	*Calippus.*	88	*Mons Ænus.*
89	*Ariſtoteles.*	89	*Mons Serrorum.*
90	*Meton.*	90	} *Montes Hyperborei.*
91	*Euſtemon.*	91	
92	*Eudoxus.*	92	*Mons Carpathes.*
93	*Menelaus.*	93	*Byzantium.*
94	*Soſigenes.*	94	*Palus Archeruſia.*
95	*Baroccius.*	95	
96	*Maurolicus.*	96	} *Montes Uxii.*
97	*Rabbi Levi.*	97	
98	*Riccius, S. J.*	98	
99	*Tacquetus, S. J*	99	*Inſula Cyanea.*
100	*Pitiſcus.*	100	*Mons Dalanguer.*
101	*S. Catharina.*	101	
102	*S. Cyrillus.*	102	} *Mons Moſchus.*
103	*S. Theophilus.*	103	
104	*Plinius.*	104	*Apollonia minor.*
105	*Schottus S. J.* *	105	*Promontorium Hippolai*
106	*Poſſidonius.*	106	*Inſula Macra.*
107	*Vitruvius.*	107	*Apollonia major.*
108	*Promontorium acutum.*	108	*Promontorium Herculis.*
109	*Exiguus*	109	*Mons Herculis.*
110	*S. Iſidorus.*	110	*Mons Strobilus.*
111	*Fracaſtorius.*	111	*Lacus Thoſpitis.*
112	*Regnaultius, S. J.* *	112	- - - - - - - -

Secundum P. Ricciolum.	Secundum Hevelium.
113 *Hercules.*	113 } *Mont. Marcocemnii.*
114 *Atlas.*	114 }
115 *Thales.*	115 *Lacus Hyperbor. ſuper.*
116 *Endymion.*	116 *Lacus Hyperboreus inf.*
117 *Goclenius.*	117 *Mons Caucaſus.*
118 *Snellius.*	118 *Mons Parapamiſus.*
119 *Taruntius.*	119 *Sinus Phaſianus.*
120 *Proclus.*	120 *Mons Corax.*
121 *Promontorium Somnii.*	121 *Montes Ælani.*
122 *Mercurius.*	122 *Montes Amadoci.*
123 *Petavius. S. J.*	123 *Petra Sogdiana.*
124 *Langrenus.*	124 *Inſula major.*
125 *Firmicus.*	125 *Paludes amaræ.*
126 *Cleomedes.*	126 }
127 *Geminus.*	127 } *Montes Riphæi.*
128 *Meſsabala.*	128 }
129 *Seneca.*	129 *Mons Mannus.*
130 *Malebranchius.* *	130 - - - - - - - -

MARIA, LACUS, PALUDES, STAGNA ET SINUS.

Secundum P. Ricciolum.		Secundum Hevelium.	
A. A.	*Mare Humorum.*	A. A.	*Sinus Sirbonis & Mare Ægyptiacum.*
B.	*Sinus Epidemiarum*	B	*Inſula Didymæ.*
C.C.C.	*Mare Nubium.*	C.C C.	*Mare Pamphilium.*
D.	*Sinus Roris.*	D.	*Sinus Hyperboreus.*
E	*Palus Nimborum.*	E.	*Sinus Tarantinus.*
F.F.F.	*Sin. Æſt. S. Medius.*	F. F. F.	*Mare Adriaticum.*
G.G.	*Mare Imbrium.*	G. G.	*Mare Mediterraneum.*
H.	*Palus Putredinis*	H.	*Promontor. Circæum.*
I.	*Mare Vaporum.*	I.	*Propontis.*
K.	*Palus Nebularum.*	K.	*Ital. & M. Apennin.*
L. L. L.	*Mare Frigoris.*	L.L.L.	*Mare Hyperboreum.*
M.	*Mare Serenitatis.*	M. }	*Pontus Euxinus*
N.N.	*Mare Tranquillitatis*	N.N. }	
O.O.O.	*Mare Nectaris.*	O O.O.	*Sinus Athen. & Sin. extremus Ponti.*

Secundum P. Ricciolum.		Secundum Hevelium.	
P.	*Stagnum Glaciei.*	P.	*Lacus Hyberb. super.*
Q.	*Lacus Mortis.*	Q	*Montes Peuce.*
R.	*Lacus Somniorum.*	R.	*Sinus Cercinites.*
S.	*Palus Somni.*	S.	*Lacus Corocondametis.*
T. T.	*Mare Fœcunditatis*	T. T.	*Mare Caspium.*
V.	*Mare Crisium & Caspium.*	V.	*Palus Mæotis.*
X.	*Sinus Iridum.*	X.	*Sinus Apollinis.*

TERRÆ, INSULÆ, PENINSULÆ, ET LITTORA.

Secundum P. Ricciolum.	Secundum Hevelium.
Terra Caloris *a Grimaldo ad Longomontanum & Scheinerum.*	Ægyptus a Palude *Mareotis*, ad montem *Troicum*. Palestina a *M. Troico* ad desertum *Evila* & Montes *Seir*.
a. a. a. Terra Sterilitatis	a. a. a. Lybiæ Pars, et Arabia.
b. b. b. Littus Eclipticum.	b. b. b. Paludes Orientales.
c. c. Peninsula Fulminum.	c. c. Mare Syrticum.
d. d. d. Insula Ventorum.	d. d. d. Insula Cercinna.
e. e. Peninsula Deliriorum.	e. e. - - - - - - - -
f. f. f. Terra Pruinæ.	f. f. f. Mauritania.
g. g. Peninsula Fulgurum.	g. g. - - - - - - - -
h. h. h. Terra Nivium.	h. h. h. Romania.
i. i. i. Terra Grandinis.	i. i. i. Moesia.
Terra Siccitatis *a Pythagora ad Endymionem.*	Regio Hyperborea.

Terra Vitæ a *littoribus maris ſerenitatis ad Senecam* & *Mercurium.*	Cherſonesus Taurica, & Paludes Hyperboreæ.
Terra Mannæ *inter Mare Nectaris* & *Fœcunditatis.*	Colchis.
Terra Sanitatis *a Mari Vaporum* ad *Valtherum*, & *Fracaſtorium.*	Asia Minor.
Terra Fertilitatis, ducta linea recta a *Fracaſtorio* ad *Valtherum* & a *Valthero* per *Clavium* ad limbum Lunæ.	Persia
Terra Vigoris, ad *Petavium*, & *Langrenum.*	Scythiæ Pars.

USUS TYPI LUNÆ IN ECLIPSIBUS LUNARIBUS.

Uſus hic eſt; diligenter ab Obſervatore notentur tempora horologii, dum peripheria denſæ umbræ terreſtris limbos macularum inſignium ſtringit, curandum maxime, ut ea tempora adnotentur, quibus umbra terræ una plures ſtringit maculas, aut alias ſtringendo, alias eodem tempore medias ſecat; cum enim tempora initii, & finis eclipſeos (ob difficultatem penumbram ab umbra diſcernendi) plerumque dubia ſint, vices quam optime ſubeunt limbi macularum circa medium diſci ſitarum, quibus temporibus confinia penumbræ & umbræ facillime dignoſcuntur. Adnotantur autem tempora tam Immerſionum, quam Emerſionum harum macularum. Initium item, medium & finis majorum macularum, & quidem earundem Emerſiones, quarum Immerſiones obſervatæ ſunt; demum quo plurium macularum habentur Obſervationes, eo aptior erit Obſervatio ad eruendas locorum terreſtrium longitudines geographicas; quarum inveniendarum methodus nova in Eph. 1764. propoſita habetur.

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APPENDIX
AD
EPHEMERIDES
ASTRONOMICAS
ANNI 1805
CONTINET

(I.) De noviſſimo fixarum Catalogo Piazziano notitiam per compendium exhibitam *a Francisco de Paula Triesnecker.*

(II.) Novas Martis Tabulas una cum perturbationibus ejusdem ab Academico Petropolitano Schuberto ſtatutis *eodem Auctore.*

(III.) Elevationem Poli Vindobonenſem e Liesganigii obſervationibus vindicatam. *Eodem Auctore.*

(IV.) Elevationem Poli Vindobonenſem ope Sextantis anglicani 10 pollicum tentaminis cauſſa exploratam *ab eodem Auctore.*

(V.) Obſervationes aſtronomicas Viennæ, aliisque in locis habitas.

DE NOVISSIMO CATALOGO FIXARUM PIAZZIANO.

Obvenit nobis circa medium Junium 1803 Catalogus fixarum Piazzianus, opus ingens, immortale, munificentia celeberrimi Auctoris, cui pro eo, ac par est, debitas tanto pro munere hic grates rependimus. Titulus operi inscriptus: *Praecipuarum stellarum inerrantium Positiones mediae ineunte seculo XIX. ex observationibus habitis in specula Panormitana ab anno* 1792 *ad annum* 1802. *Panormi* 1803. *Typis regiis.* Continet is numerum stellarum universim 6748, quarum positiones ex observationibus Panormitanis ad annum 1800 ineuntem exhibentur. Ex his occurrunt in Wollastonio 4118; 969 in diversis Lalandii Catalogis; reliquae 1661 ab ipso Piazzio primum observatae.

Praemissa ad societatem regiam Londinensem allocutione, cujus nomini, hoc opus inscribit, et dedicat, transgreditur Cl. auctor ad ea enarranda, quae rationem suscepti laboris reddere videntur. Ante omnia numerum diversorum Catalogorum recenset, qui ab Hiparcho et Ptolomaeo usque ad nostra haec tempora in lucem prodiere, suamque de iis sententiam exponit.

Ubi sermo de Bradleji Catalogo occurrit, non ambigue intelligitur, ipsum a Piazzio nullo in pretio haberi. Ita enim scribit: „De iis, quae immortalis aberrationis, nutationisque inventor Bradlejus hac in parte peregit, pauca sane dicere possumus. Scimus equidem bis coelum perlu-

lustrasse, omnesque Flamsteedii stellas iterum, atque iterum observasse, easque ad annum 1744 supputasse. Ad hunc tamen usque diem trecentarum octoginta novem tantum observationes in lucem prodiere opera et studio Cl. Ghilpinii societatis Londinensis Assistentis, qui earum ascensiones rectas, atque declinationes calculo deduxit, inseruitque ephemeridibus Grenovicensibus 1773. At cum plurimis scateant mendis, forte dubitandum, ex manuscripto autographo fuisse erutas. E vivis enim erepto Bradlejo ejus testamenti curatores, nescio quo male sano consilio, tanti viri scripta occultare, nec nisi post longas contestationes ea proferre haud erubuere. Loco depositi ex Judicis sententia consignata fuere Oxoniensi Universitati, a qua ultimis hisce diebus tandem emersisse audio, licet ipse adhuc non viderim."

Ceteris omnibus Catalogus Maskelynii præferendus, qui licet plures, quam triginta sex stellas non contineat, fixas tamen habet in omnem cœli plagam adeo apte dispositas, ut diu noctuque observari, ad easque ceterarum loca referri possint.

Ubi jam de suis observationibus sermonem inferre parat, fatetur Piazzius, se ducem Wollastonium fuisse secutum, e cujus Catalogo eas seligebat stellas, quæ ita ordinari possent, ut inter unam et alteram unius saltem minuti foret intervallum, quæque omnes ad Austrum jacerent, vel ad Boream. Siquæ e triginta sex Maskelynii stellis inferi poterant, non omittebantur. Hæc stellarum series non una, sed octo, sex, et ad minimum quatuor vicibus, totidem continuatis noctibus observata est facie instrumenti alternis ad orientem et occidentem versa. Cujuslibet stellæ observatus transitus per meridianum, et a vertice distantia; annis 1791 et 1792 lecta utraque divisione, deinceps vero inferiore tantum, ob multa incommoda, quæ hac ratione evitabantur. Omnibus Wollastonii zonis iterum atque iterum perlustratis non raro contigit, ut in telescopio aliæ simul apparerent stellæ, a Wollastonio non de-

descriptæ, quæ aut eodem tempore observatæ, aut in aliud tempus reservatæ. In observationum decursu et stellæ magnitudo, qualem ipse æstimabat, et siqua erat duplex, aliaque ejus generis, quantum per temporis angustias fieri poterat, notata; neque aeris temperies initio et fine observationum prætermissa, inspectis barometro, triplicisque generis thermometris. Tempus, quod observationibus istis nocturnis tribui solebat, nunquam ultra quatuor horas exporrigebatur.

Absolutis observationibus ascensiones rectæ et declinationes erant supputandæ. Qua in re præprimis nosse juvat annuam æquinoctiorum præcessionem, in qua inter astronomos non satis convenit. Piazzius comparatis plurimis suis observationibus cum Flamsteedii, Caillii, et Majeri Catalogis eandem elicuit 50″10; amplexus tamen est 50″11; quia inter suam et illam a Cl. de Lambre definitam medium fere locum obtinet.

Ascensiones rectæ e comparatione cum fixis Maskelynianis ad 1790, aut cum aliis, quas ipse Piazzius in qualibet siderei temporis hora e prioribus in subsidium determinaverat, definitæ. Declinationes omnes statutæ, posita altitudine poli speculæ Panormitanæ 38°6′45″5. In his laboribus adjutus maxime fuit a tribus, quos continuo nactus est, socios; e quibus Nicolao Cacciatore maximam laudem tribuit, quin meritis anteriorum quidquam decerptum velit.

Cum stellarum positiones ad unam eandemque epocham essent redigendæ, delecta est prima Januarii 1800, eo sane consilio, ut Catalogi decem aut centum annis anteriores comparari cum isto facile possent. „Hinc vero quis fortasse mirabitur, ait Piazzius, me diem primam Januarii anni 1800 seculi XIX. initium ponere. Haud fert animus, quæstionem, quæ tanto partium studio anno superius elapso per totam efferbuit Europam, iterum excitare. Id unum mihi propositum est, naturalem, receptamque apud astronomos numerandi rationem sequi. Apud ipsos quælibet uni-

unitas non completa denominationem retinet unitatis proxime præcedentis, addita parte unitatis ſubſequentis. Tempora, a quibus inchoantur Epochæ, non annus, non dies, non hora; ſed momenta ſunt, a quibus computantur horæ, dies, anni. Quævis igitur Epocha habeat oportet annum o, qui unus dici nequit, niſi completis duodecim menſibus. In familiari ſermone annus o in uſu non eſt, eo nunquam uſi ſunt Chronologi, nec uti debere contendimus. Non hinc tamen ſequitur, primum cujusque Epochæ annum improviſo veluti ex nihilo conſurgere. Ad conciliandam igitur genuinam verborum ſignificationem cum imperfecta chronologorum loquendi ratione; diſtinctio ſane conſtituenda videtur inter Epochæ cujusque initium, et facinus illud quodcunque illuſtre, a quo eadem denominationem ſumit. Prius, æræ nempe initium (cum anno o ſubſtituitur annus 1) tacite ſupponitur unius anni tempore, poſteriori, facinori ſcilicet anteire. Ita ab æræ Chriſtianæ initio ad annum usque 1800 numerari debent XVIII. ſecula completa; a Chriſti vero Nativitate anni tantum 1799 pariter completi. Hac ſane ratione tolluntur ambages omnes, nec ulla occurrere poteſt difficultas, aut confuſio in annorum ſupputatione.

Ad dignoſcendam cujusque fixæ magnitudinem, diſcernendosque diverſarum magnitudinum terminos, non facile apud auctores occurrebat via, ſeu methodus expedita, quæ rem per ſe difficilem effectam dare poſſet. Re attente perpenſa, plurimisque inſtitutis tentaminibus ſequentem ſibi viam Piazzius ineundam cenſuit. Reticulum circularis inſtrumenti, luce per axem immiſſa, et priſmatis vitrei auxilio per gradus quoscunque augenda, aut imminuenda, illuminatur. Comperto igitur, atque definito lucis gradu, quo imminuto reticuli fila deſtincte amplius videri nequeunt, ex eodem ſtellarum magnitudines definiri cœptæ. Quæ enim lucem augendo evaneſcere incipiebant, eæ octavæ magnitudinis ſtatutæ: Septimam inter, et octavam, quæ continuo ſplendeſcere, licet aliquanto minus obſervabantur; ſicque gradatim lucem intendendo, quod facillimum

erat,

erat, de ceteris judicabatur usque ad quartam magnitudinem: splendidiores vero horizontali primum filo tegebantur; tumque earum magnitudo definita. Magnitudines Majeri cum Piazzianis collatæ, visæ sunt qnandoque justo minores; sed justo majores quamplurimæ, quæ in Lalandii ter mille Catalogo habentur: non paucæ in eodem sextæ magnitudinis notatæ, in octavam a Piazzio rejectæ.

Tandem agit Piazzius de instrumentis suis, quibus observationes peractæ sunt: quorum descriptionem cum pluribus abhinc annis pleniorem dederit; hic summa tantum capita repetit.

In organo circulari telescopii lens objectiva est achromatica, diameter 3 poll.; foci longitudo 5 ped., reticulum e duobus filis argenteis constat, quorum verticale unum, horizontale alterum; collustratur luce per axem immissa, prismate vitreo ad lubitum moderanda. Ocularia plurima diversi augmenti: ad communem usum destinatum quinquagies auget objectum. Sed tria sunt præcipue, quæ ad perfectionem hujus instrumenti adhucdum desiderantur.

1mo. Inæqualis metalli contractio, atque expansio. Si in omnibus circuli partibus eadem foret contractio, vel dilatatio, lectis superioribus atque inferioribus divisionibus, nihil incerti ex hac parte in distantiis observatis. At partes aëri aperto obversæ magis expanduntur, vel minus contrahuntur remotis: quod experientia sæpe testatum fecit. Thermometris in circuli circumferentia pluribus, in distantia 15° uno ab altero dispositis, inæqualitas patefieret, cujus rationem, tabella probe constructa, habere, non foret difficile. Verum, e methodo observandi a Piazzio adhibita, ubi facies instrumenti alternis vicibus ad orientem et occidentem convertitur, inæqualitates ex parte compensari videntur: præsertim si observationes continentibus, non interruptis noctibus fiant; nec improviso in aeris temperie mutatio contingat. Majores differentiæ inter

inter diverſa plurium obſervationum media in diſtantiis a vertice perraro 2″ vel 3″ excedebant; idque tum eveniebat maxime, cum aut cœli inclementia interrumpebantur, aut improviſo Volturnus, vel Auſter excitabantur. His ventis exortis id ſemper expertus eſt Piazzius, quod olim ad caput bonæ ſpei obſervaverat Caillius: ſtellas nempe tremere, ſubſultare, atque cometarum more in comæ ſpeciem promitti. Sed tum ut plurimum ab obſervationibus abſtinetur.

2do, Specula diviſionibus illuſtrandis deſtinata, noctu lucem mutuantur a lampade prope inſtrumentum poſita, quod pluribus obnoxium eſt difficultatibus. Lampades enim binæ neceſſariæ, inferior una, altera ſuperior, fixæ ab aëris agitatione immunes, atque ita diſpoſitæ, ut nec columnæ, nec circuli radii lucem intercipiant, quæcunque ſit inſtrumenti poſitio. Quæ omnia non ſine difficultate obtinentur, præſertim in ſpeculo ſuperiori. Huic incommodo mederi potuiſſet artifex, vel lampadem, quo reticulum collustratur, ita comparando, ut ipſius lux in ſpecula etiam remitti poſſet; vel aliam lampadem inter columnas collocando.

3tio. Reticulum duobus tantum conſtat filis, horizontali, et verticali. Quare cum plures ſtellæ ſimul occurrunt in teleſcopio; eodem immoto binæ tantum, nec ſatis obſervari queunt. Maximæ utilitatis forent duo alia fila verticalia a meridiano æquidiſtantia, et tertium horizontale, mobile.

De tubo meridiano, ſive de Tranſitus inſtrumento ſequentia paucis compleĉtitur; ipſum uti circulum, ſimiliter eſſe opus Ramsdenii; duabus firmiſſimis inſiſtere e marmore columnis; fulcra, quæ erant primum ex metallo, nunc haberi ex achate affabre perpolito; focum lentis objectivæ eſſe 5 pedum; lentem ocularem cochlea ad quinque reticuli fila ſucceſſive transferri poſſe; vim ejus amplificantem eſſe 80; ejus poſitionem ſigno ad unius milliaris diſtantiam

ver-

versus boream explorari; et siqua deviatio sit deprehensa, ad meridianum restitui.

Utebatur Piazzius duobus maxime horologiis, quorum utrumque pendulis e cupreis chalibeisque virgis erat instructum; alterum præstantissimorum artificum Dutton et Mudge; alterum Coming et Grant; hoc circulo, illud meridiano destinatum. Utriusque motus maxime regulares, Mudgiani præcipue.

Demum sequentes positionibus suis fixarum Piazzius statuit limites: omnibus rite perpensis intra tria aut quatuor secunda declinationes tutas haberi posse, illis tamen, quæ maxime australes sunt, exceptis, iisque, quæ e duabus vel unica tantum observatione sunt elicitæ: ascensiones vero rectas intra quinque vel sex secunda, si excipiantur stellæ maxime boreales, quæ majori laborant dubio.

Jam sequitur ipse Cataloxus fixarum, qui sequentem præsefert ordinem, atque dispositionem:

Universim sexdecim absolvitur columnis.

I. Continet Flamsteedii asterismorum numeros, nomina, et Bayeri characteres; atque magnitudines a Piazzio definitas.

II. et III. Ascensionem rectam in tempore, ipsiusque præcessionem.

IV. et V. Ascensionem rectam in partibus æquatoris, itemque præcessionem.

VI. Numerum observationum in ascensione recta.

VII. VIII. et IX. Declinationes, ejus præcessionem, et numerum observationum.

X.

X. XI. XII. XIII. XIV. et XV. Differentias a Catalogis Flamsteedii, Casllii et Majeri tum in ascensione recta, tum in declinatione.

XVI. Differentias a Catalogis Lalandii et Zachii, Huic postremo quoad ascensiones rectas maximam laudem tribuit Piazzius; sed quoad declinationes Majero.

Catalogus is Piazzianus est ejusmodi, ut in compendio hic exhiberi nullo modo possit. Juvat tamen hic illas fixas ob oculos ponere, in quibus Piazzius in Appendice sua motum proprium in declinatione ex observationibus suis deprehendere sibi visus est.

Signum + in ultima columna propositum indicat motum versus boream; signum — versus austrum.

Nomen stellæ & Character.		Declinat.med. 1800	Præcess. annua.	Mot.prop. ann.
γ Pegasi	2.3	14° 4′21″5 B	+ 20″02	—
ϰ Cassiopeæ		61 49 33 2 B	+ 19 94	— 0″27
τ Ceti		16 59 40 7 A	— 18 34	+ 0 64
α Ariet.		22 30 40 0 B	+ 17 517	— 0 165
α Ceti		3 17 51 8 B	+ 14 67	— 0 606
δ Persei		47 8 3 1 B	+ 12 286	— 0 46
ε Tauri		18 43 26 7 B	+ 8 72	— 0 24
● Tauri		16 5 42 0 B	+ 8 12	— 0 44
α Aur. *Capell.*		45 46 39 1 B	+ 5 02	— 0 417
β Orion. *Rigel*		8 26 35 5 A	— 4 76	— 0 24
τ Orion.		7 4 18 0 A	— 4 520	— 0 20
β Tauri		28 25 27 1 B	+ 4 58	— 0 482
α Orionis		7 21 26 0 B	+ 1 37	— 0 124
γ Geminor.		16 33 29 2 B	— 2 255	— 0 07
α Can. maj. *Sir.*		16 27 5 0 A	+ 3 160	— 1 356
γ Can. maj.		15 20 48 6 A	+ 4 730	— 0 10

No-

Nomen stellæ & Character.	Declinat. med. 1800	Præcess. annua.	Mot. prop. ann.
α Gemin. *Castor*	32° 18′ 46″ 0 B	− 6″ 964	− 0″ 466
α Can. min. *Procy.*	5 43 38 0 B	− 7 570	− 1 098
β Gemin. *Pollux*	28 29 48 5 B	− 7 900	− 0 305
α 2 Canceri	12 37 22 4 B	− 13 351	− 0 177
α Hydræ	7 47 49 0 A	+ 15 21	− 0 279
δ Leonis	21 37 3 0 B	− 19 414	− 0 366
β Leonis	15 41 25 0 B	− 19 935	− 0 419
β Virginis	2 53 31 5 B	− 19 947	− 0 78
α Corvi	23 36 43 0 A	+ 20 02	− 0 35
δ Corvi	15 23 58 0 A	+ 19 952	− 0 305
α Virginis	10 6 42 8 A	+ 18 982	− 0 263
η Ursæ maj.	50 19 0 0 B	− 18 166	− 0 202
α Dracon.	65 20 8 0 B	− 17 393	− 0 118
κ Bootis	52 43 51 0 B	− 17 067	− 0 113
α Boot. *Arctur.*	20 13 48 8 B	− 17 050	− 2 275
ν 1 Virginis	1 20 0 6 A	+ 16 933	− 0 367
ϑ Boot.	52 46 49 8 B	− 16 488	− 0 352
α 2 Libræ	15 12 3 7 A	+ 15 353	− 0 262
β Libræ	8 38 1 5 A	+ 13 77	+
α Coron. bor. *Gem.*	27 23 49 2 B	− 12 45	− 0 138
α Serpent.	7 3 54 2 B	− 11 880	− 0 368
α Herculis	14 37 48 6 B	− 4 731	− 0 174
α Ophiuch.	12 43 6 0 B	− 2 980	− 0 493
η Serpent.	2 56 17 9 A	− 0 970	− 0 980*
α Lyræ *Wega*	38 36 22 2 B	+ 2 603	+ 0 297
γ Aquilæ	10 8 14 8 B	+ 8 390	− 0 298
β Aquilæ	5 55 14 3 B	+ 8 890	− 0 899
α Aquarii	1 17 3 7 A	− 17 123	+ 0 188
α Pegasi	14 7 58 9 B	+ 19 209	+ 0 056
α Andromed.	27 59 11 5 B	+ 20 023	− 0 245

De

De γ Pegaſi, et β Libræ Piazzius motum ſuſpicatur aliquem, prioris auſtrum verſus; alterius in boream, quin tamen de quantitate motus quidquam ſtatuere audeat.

In α Aquilæ e Piazzii ſententia motus proprius vel nullus, vel ſumme exiguus; juxta Majerum — 0″08. Verum comparatis poſitionibus Bradleji, Majeri, et Caillii cum Piazzianis idem prodit + 0″447, ſimillimus illi, quem olim e comparatione Flamſteedii cum obſervationibus Maskelynianis eruimus.

Triesnecker.

TABULÆ MARTIS

CUM

PERTURBATIONIBUS EJUSDEM

AB

ACADEMICO PETROPOLITANO SCHUBERTO

STATUTIS

A

FRANC. DE PAULA TRIESNECKER.

TABULÆ MARTIS.

Epochæ motuum mediorum, Longitudinis, Aphelii, et Nodi ♂

Anni	Longit. med. ♂					Aphelium					Nodus				
	S.	G.	M.	S.	D.	S.	G.	M.	S.	D.	S.	G.	M.	S.	D.
B 1600	3	20	12	43	4	4	28	43	14	1	1	16	32	3	2
C 1700	5	21	23	27	2	5	0	32	54	8	1	17	16	9	2
B 1720	1	9	43	53	2	5	0	54	51	0	1	17	24	58	4
B 1740	8	28	4	19	3	5	1	16	47	1	1	17	33	47	6
B 1760	4	16	24	45	4	5	1	38	43	3	1	17	42	36	8
B 1780	0	4	45	11	5	5	2	0	39	5	1	17	51	26	0
B 1792	4	21	45	27	1	5	2	13	49	2	1	17	56	43	5
1793	11	3	2	36	8	5	2	14	55	0	1	17	57	9	9
1794	5	14	19	46	4	5	2	16	0	7	1	17	57	36	4
1795	11	25	36	56	1	5	2	17	6	5	1	17	58	2	8
B 1796	6	7	25	32	3	5	2	18	12	4	1	17	58	29	4
1797	0	18	42	42	0	5	2	19	18	2	1	17	58	55	8
1798	6	29	59	51	6	5	2	20	23	9	1	17	59	22	3
1799	1	11	17	1	3	5	2	21	29	7	1	17	59	48	7
1800	7	22	34	11	0	5	2	22	35	5	1	18	0	15	1
1801	2	3	51	20	7	5	2	23	41	3	1	18	0	41	5
1802	8	15	8	30	3	5	2	24	47	0	1	18	1	8	0
1803	2	26	25	40	0	5	2	25	52	8	1	18	1	34	4
B 1804	9	8	14	16	2	5	2	26	58	7	1	18	2	0	9
1805	3	19	31	25	9	5	2	28	4	5	1	18	2	27	3
1806	10	0	48	35	5	5	2	29	10	2	1	18	2	53	8
1807	4	12	5	45	2	5	2	30	16	0	1	18	3	20	2
B 1808	10	23	54	21	4	5	2	31	22	0	1	18	3	46	3
1809	5	5	11	31	1	5	2	32	27	8	1	18	4	13	2
1810	11	16	28	40	7	5	2	33	33	5	1	18	4	39	7
1811	5	27	45	50	4	5	2	34	39	3	1	18	5	6	1
B 1812	0	9	34	26	6	5	2	35	45	2	1	18	5	32	6
1813	6	20	51	36	3	5	2	36	51	0	1	18	5	59	0
1814	1	2	8	45	9	5	2	37	56	7	1	18	6	25	5
1815	7	13	25	55	6	5	2	39	2	5	1	18	6	51	9

TABULÆ MARTIS.

Motus medius ♂ pro annis completis

Anni		Longit. med. ♂					Aphelium					Nodus				
		S.	G.	M.	S.	D.	S.	G.	M.	S.	D.	S.	G.	M.	S.	D.
	1	6	11	17	9	7	0	0	1	5	8	0	0	0	26	4
	2	0	22	34	19	3	0	0	2	11	5	0	0	0	52	9
	3	7	3	51	29	0	0	0	3	17	3	0	0	1	19	3
B	4	1	15	40	5	2	0	0	4	23	3	0	0	1	45	8
	5	7	26	57	14	9	0	0	5	29	0	0	0	2	12	2
	6	2	8	14	24	5	0	0	6	34	7	0	0	2	38	7
	7	8	19	31	34	2	0	0	7	40	5	0	0	3	5	1
B	8	3	1	20	10	4	0	0	8	46	5	0	0	3	31	7
	9	9	12	37	20	1	0	0	9	52	3	0	0	3	58	1
	10	3	23	54	29	7	0	0	10	58	0	0	0	4	24	6
	11	10	5	11	39	4	0	0	12	3	8	0	0	4	51	0
B	12	4	17	0	15	6	0	0	13	9	7	0	0	5	17	5
	13	10	28	17	25	3	0	0	14	15	5	0	0	5	43	9
	14	5	9	34	34	9	0	0	15	21	2	0	0	6	10	4
	15	11	20	51	44	6	0	0	16	27	0	0	0	6	36	8
B	16	6	2	40	20	8	0	0	17	32	9	0	0	7	3	4
	17	0	13	57	30	5	0	0	18	38	7	0	0	7	29	8
	18	6	25	14	40	1	0	0	19	44	4	0	0	7	56	3
	19	1	6	31	49	8	0	0	20	50	2	0	0	8	22	7
B	20	7	18	20	26	0	0	0	21	56	2	0	0	8	49	2
B	40	3	6	40	52	1	0	0	43	52	3	0	0	17	38	4
B	60	10	25	1	18	2	0	1	5	48	5	0	0	26	27	6
B	80	6	13	21	44	3	0	1	27	44	7	0	0	35	16	8
B	100	2	1	42	10	4	0	1	49	40	9	0	0	44	6	0
C	100	2	1	10	43	8	0	1	49	40	7	0	0	44	5	9

TABULÆ MARTIS.

Motus medius pro menſium diebus.

Anni Biſſextil.	Anni Commun.	Januarius. Long. m. ♂ S. G. M. S. D.	Januarius. Aph. S.	Januarius. Nod. S.	Februarius. Long. m. ♂ S. G. M. S. D.	Februarius. Aph. S.	Februarius. Nod. S.
1	0	0 0 0 0 0	0 0	0 0	0 16 14 46 4	5 6	2 3
2	1	0 0 31 26 7	0 2		0 16 46 13 0	5 8	
3	2	0 1 2 53 3	0 4		0 17 17 39 7	5 9	
4	3	0 1 34 20 0	0 5		0 17 49 6 3	6 1	
5	4	0 2 5 46 6	0 7		0 18 20 33 0	6 3	
6	5	0 2 37 13 3	0 9	0 4	0 18 51 59 6	6 5	2 7
7	6	0 3 8 39 9	1 1		0 19 23 26 3	6 7	
8	7	0 3 40 6 6	1 3		0 19 54 52 9	6 8	
9	8	0 4 11 33 3	1 4		0 20 26 19 6	7 0	
10	9	0 4 42 59 9	1 6		0 20 57 46 3	7 2	
11	10	0 5 14 26 6	1 8	0 7	0 21 29 12 9	7 4	3 0
12	11	0 5 45 53 2	2 0		0 22 0 39 6	7 5	
13	12	0 6 17 19 9	2 2		0 22 32 6 2	7 7	
14	13	0 6 48 46 5	2 3		0 23 3 32 9	7 9	
15	14	0 7 20 13 2	2 5		0 23 34 59 5	8 1	
16	15	0 7 51 39 8	2 7	1 0	0 24 6 26 2	8 3	3 4
17	16	0 8 23 6 5	2 9		0 24 37 52 9	8 4	
18	17	0 8 54 33 2	3 1		0 25 9 19 5	8 6	
19	18	0 9 25 59 8	3 2		0 25 40 46 2	8 8	
20	19	0 9 57 26 5	3 4		0 6 12 12 8	9 0	
21	20	0 10 28 53 1	3 6	1 4	0 26 42 39 5	9 2	3 7
22	21	0 11 0 19 8	3 8		0 27 15 6 1	9 3	
23	22	0 11 31 46 4	4 0		0 27 46 32 8	9 5	
24	23	0 12 3 13 1	4 1		0 28 17 59 5	9 7	
25	24	0 12 34 39 8	4 3		0 28 49 26 1	9 9	
26	25	0 13 6 6 4	4 5	1 8	0 29 20 52 8	10 1	4 0
27	26	0 13 37 33 1	4 7		0 29 52 19 4	10 2	
28	27	0 14 8 59 7	4 9		1 0 23 46 1	10 4	
29	28	0 14 40 26 4	5 0		1 0 55 12 7	10 6	
30	29	0 15 11 53 0	5 2				
31	30	0 15 43 19 7	5 4	2 2			
	31	0 16 14 46 4	5 6				

TABULÆ MARTIS.

Motus medius ♂ pro mensium diebus.

Dies.	Martius. Long. m. ♂	Martius. Aph.	Martius. Nod.	Aprilis. Long. m. ♂	Aprilis. Aph.	Aprilis. Nod.
	S. G. M. S. D.	S. D.	S. D.	S. G. M. S. D.	S. D.	S. D.
1	1 1 26 39 4	10 8	4 3	1 17 41 25 8	16 4	6 5
2	1 1 58 6 1	11 0		1 18 12 52 4	16 6	
3	1 2 29 32 7	11 1		1 18 44 19 1	16 7	
4	1 3 0 59 3	11 3		1 19 15 45 7	16 9	
5	1 3 32 26 0	11 5	4 7	1 19 47 12 4	17 1	6 9
6	1 4 3 52 6	11 7		1 20 18 39 0	17 3	
7	1 4 35 19 3	11 9		1 20 50 5 7	17 5	
8	1 5 6 46 0	12 0		1 21 21 32 4	17 6	
9	1 5 38 12 6	12 2		1 21 52 59 0	17 8	
10	1 6 9 39 3	12 4	5 0	1 22 24 25 7	18 0	7 2
11	1 6 41 5 9	12 6		1 22 55 52 3	18 2	
12	1 7 12 32 6	12 8		1 23 27 19 0	18 4	
13	1 7 43 59 2	12 9		1 23 58 45 6	18 5	
14	1 8 15 25 9	13 1		1 24 30 12 3	18 7	
15	1 8 46 52 5	13 3	5 4	1 25 1 38 9	18 9	7 6
16	1 9 18 19 2	13 5		1 25 33 5 6	19 1	
17	1 9 49 45 9	13 7		1 26 4 32 3	19 3	
18	1 10 21 12 5	13 8		1 26 35 58 9	19 4	
19	1 10 52 39 2	14 0		1 27 7 25 6	19 6	
20	1 11 24 5 8	14 2	5 8	1 27 38 52 2	19 8	8 0
21	1 11 55 32 5	14 4		1 28 10 18 9	20 0	
22	1 12 26 59 1	14 6		1 28 41 45 5	20 2	
23	1 12 58 25 8	14 7		1 29 13 12 2	20 3	
24	1 13 29 52 5	14 9		1 29 44 38 9	20 5	
25	1 14 1 19 1	15 1	6 1	2 0 16 5 5	20 7	8 3
26	1 14 32 45 8	15 3		2 0 47 32 2	20 9	
27	1 15 4 12 4	15 5		2 1 18 58 8	21 1	
28	1 15 35 39 1	15 6		2 1 50 25 5	21 2	
29	1 16 7 5 7	15 8		2 2 21 52 1	21 4	
30	1 16 38 32 4	16 0		2 2 53 18 8	21 6	8 7
31	1 17 9 59 1	16 2	6 5			

TABULÆ MARTIS.

Motus medius ♂ pro menſium diebus.

	Majus.			Junius.		
Dies	Long. m. ♂	Aph.	Nod.	Long. m. ♂	Aph.	Nod.
	S. G. M. S. D.	S. D.	S. D.	S. G. M. S. D.	S. D.	S. D.
1	2 3 24 45 5	21 8	8 7	2 19 39 31 8	27 4	11 0
2	2 3 56 12 1	22 0		2 20 10 58 4	27 6	
3	2 4 27 38 8	22 1		2 20 42 25 1	27 7	
4	2 4 59 5 4	22 3		2 21 13 51 7	27 9	
5	2 5 30 32 1	22 5	9 1	2 21 45 18 4	28 1	11 4
6	2 6 1 58 7	22 7		2 22 16 45 0	28 3	
7	2 6 33 25 4	22 9		2 22 48 11 7	28 5	
8	2 7 4 52 1	23 0		2 23 19 38 4	28 6	
9	2 7 36 18 7	23 2		2 23 51 5 0	28 8	
10	2 8 7 45 4	23 4	9 4	2 24 22 31 7	29 0	11 7
11	2 8 39 12 0	23 6		2 24 53 58 3	29 2	
12	2 9 10 38 7	23 8		2 25 25 25 0	29 4	
13	2 9 42 5 3	23 9		2 25 56 51 6	29 5	
14	2 10 13 32 0	24 1		2 26 28 18 3	29 7	
15	2 10 44 58 6	24 3	9 8	2 26 59 44 9	29 9	12 1
16	2 11 16 25 3	24 5		2 27 31 11 6	30 1	
17	2 11 47 52 0	24 7		2 28 2 38 3	30 3	
18	2 12 19 18 6	24 8		2 28 34 4 9	30 4	
19	2 12 50 45 3	25 0		2 29 5 31 6	30 6	
20	2 13 22 11 9	25 2	10 2	2 29 36 58 2	30 8	12 5
21	2 13 53 38 6	25 4		3 0 8 24 9	31 0	
22	2 14 25 5 2	25 6		3 0 39 51 5	31 2	
23	2 14 56 31 9	25 7		3 1 11 18 2	31 3	
24	2 15 27 58 6	25 9		3 1 42 44 9	31 5	
25	2 15 59 25 2	26 1	10 5	3 2 14 11 5	31 7	12 8
26	2 16 30 51 9	26 3		3 2 45 38 2	31 9	
27	2 17 2 18 5	26 5		3 3 17 4 8	32 1	
28	2 17 33 45 2	26 6		3 3 48 31 5	32 2	
29	2 18 5 11 8	26 8		3 4 19 58 2	32 4	
30	2 18 36 38 5	27 0	10 9	3 4 51 24 8	32 6	
31	2 19 8 5 1	27 2				13 2

TABULÆ MARTIS.

Motus medius ♂ pro menſium diebus.

Dies.	Julius. Long. m. ♂ S. G. M. S. D.	Aph. S. D.	Nod. S. D.	Auguſtus. Long. m. ♂ S. G. M. S. D.	Aph. S. D.	Nod. S. D.
1	3 5 22 51 5	32 8	13 2	3 21 37 37 9	38 4	15 4
2	3 5 54 18 1	33 0		3 22 9 4 5	38 6	
3	3 6 25 44 8	33 1		3 22 40 31 2	38 7	
4	3 6 57 11 4	33 3		3 23 11 57 8	38 9	
5	3 7 28 38 1	33 5	13 6	3 23 43 24 5	39 1	15 7
6	3 8 0 4 7	33 7		3 24 14 51 1	39 3	
7	3 8 31 31 4	33 9		3 24 46 17 8	39 5	
8	3 9 2 58 1	34 0		3 25 17 44 5	39 6	
9	3 9 34 24 7	34 2		3 25 49 11 1	39 8	
10	3 10 5 51 4	34 4	13 9	3 26 20 37 8	40 0	16 1
11	3 10 37 18 0	34 6		3 26 52 4 4	40 2	
12	3 11 8 44 7	34 8		3 27 23 31 1	40 4	
13	3 11 40 11 3	34 9		3 27 54 57 7	40 5	
14	3 12 11 38 0	35 1		3 28 26 24 4	40 7	
15	12 43 4 6	35 3	14 3	3 28 57 51 0	40 9	16 5
16	3 13 14 31 3	35 5		3 29 29 17 7	41 1	
17	3 13 45 58 0	35 7		4 0 0 44 4	41 3	
18	3 14 17 24 6	35 8		4 0 32 11 0	41 4	
19	3 14 48 51 3	36 0		4 1 3 37 7	41 6	
20	3 15 20 17 9	36 2	14 7	4 1 35 4 3	41 8	16 8
21	3 15 51 44 6	36 4		4 2 6 31 0	42 0	
22	3 16 23 11 2	36 6		4 2 37 57 6	42 2	
23	3 16 54 57 9	36 7		4 3 9 24 3	42 3	
24	3 17 26 4 6	36 9		4 3 40 51 0	42 5	
25	3 17 57 31 2	37 1	15 0	4 4 12 17 6	42 7	17 2
26	3 18 28 57 9	37 3		4 4 43 44 3	42 9	
27	3 19 0 24 5	37 5		4 5 15 10 9	43 1	
28	3 19 31 51 2	37 6		4 5 46 37 6	43 2	
29	3 20 3 17 9	37 8		4 6 18 4 2	43 4	
30	3 20 34 44 5	38 0		4 6 49 30 9	43 6	
31	3 21 6 11 2	38 2	15 4	4 7 20 57 6	43 8	17 6

TABULÆ MARTIS.

Motus medius ♂ pro menſium diebus.

	September.			October.		
Dies.	Long. m. ♂	Aph.	Nod	Long. m. ♂	Aph.	Nod
	S. G. M. S. D.	S. D.	S. D.	S. G. M. S. D.	S. D.	S. D.
1	4 7 52 24 3	44 0	17 6	4 23 35 43 9	49 4	19 8
2	4 8 23 50 9	44 2		4 24 7 10 6	49 6	
3	4 8 55 17 6	44 3		4 24 38 37 2	49 7	
4	4 9 26 44 2	44 5		4 25 10 3 9	49 9	
5	4 9 58 10 9	44 7	18 0	4 25 41 30 5	50 1	20 2
6	4 10 29 37 5	44 9		4 26 12 57 2	50 3	
7	4 11 1 4 2	45 1		4 26 44 23 8	50 5	
8	4 11 32 30 9	45 2		4 27 15 50 5	50 6	
9	4 12 3 57 5	45 4		4 27 47 17 2	50 8	
10	4 12 35 24 2	45 6	18 3	4 28 18 43 8	51 0	20 5
11	4 13 6 50 8	45 8		4 28 50 10 5	51 2	
12	4 13 38 17 5	46 0		4 29 21 37 1	51 4	
13	4 14 9 44 1	46 1		4 29 53 3 8	51 5	
14	4 14 41 10 8	46 3		5 0 24 30 4	51 7	
15	4 15 12 37 4	46 5	18 7	5 0 55 57 1	51 9	20 9
16	4 15 44 4 1	46 7		5 1 27 23 7	52 1	
17	4 16 15 30 8	46 9		5 1 58 50 4	52 3	
18	4 16 46 57 4	47 0		5 2 30 17 1	52 4	
19	4 17 18 24 1	47 2		5 3 1 43 7	52 6	
20	4 17 49 50 7	47 4	19 1	5 3 33 10 4	52 8	21 2
21	4 18 21 17 4	47 6		5 4 4 37 0	53 0	
22	4 18 52 44 0	47 8		5 4 36 3 7	53 2	
23	4 19 24 10 7	47 9		5 5 7 30 3	53 3	
24	4 19 55 37 4	48 1		5 5 38 57 0	53 5	
25	4 20 27 4 0	48 3	19 5	5 6 10 23 7	53 7	21 6
26	4 20 58 30 7	48 5		5 6 41 50 3	53 9	
27	4 21 29 57 3	48 7		5 7 13 17 0	54 1	
28	4 22 1 24 0	48 8		5 7 44 43 7	54 2	
29	4 22 32 50 6	49 0		5 8 16 10 3	54 4	
30	4 23 4 17 3	49 2	19 8	5 8 47 37 0	54 6	
31				5 9 19 3 7	54 8	22 0

TABULÆ MARTIS.

Motus medius ♂ pro mensium diebus.

Dies.	November.									December.								
	Long. m. ♂					Aph.		Nod.		Long. m. ♂					Aph.		Nod.	
	S.	G.	M.	S.	D.	S.	D.	S.	D.	S.	G.	M	S.	D.	S.	D.	S.	D.
1	5	9	50	30	4	55	0	22	0	5	25	33	50	1	60	4	24	2
2	5	10	21	57	0	55	2			5	26	5	16	7	60	6		
3	5	10	53	23	7	55	3			5	26	36	43	4	60	7		
4	5	11	24	50	3	55	5			5	27	8	10	0	60	9		
5	5	11	56	17	0	55	7	22	3	5	27	39	36	7	61	1	24	5
6	5	12	27	43	6	55	9			5	28	11	3	3	61	3		
7	5	12	59	10	3	56	1			5	28	42	30	0	61	5		
8	5	13	30	37	0	56	2			5	29	13	56	7	61	6		
9	5	14	2	3	6	56	4			5	29	45	23	3	61	8		
10	5	14	33	30	3	56	6	22	7	6	0	16	50	0	62	0	24	9
11	5	15	4	56	9	56	8			6	0	48	16	6	62	2		
12	5	15	36	23	6	57	0			6	1	19	43	3	62	4		
13	5	16	7	50	2	57	1			6	1	51	9	9	62	5		
14	5	16	39	16	9	57	3			6	2	22	36	6	62	7		
15	5	17	10	43	5	57	5	23	1	6	2	54	3	2	62	9	25	3
16	5	17	42	10	2	57	7			6	3	25	29	9	63	1		
17	5	18	13	36	9	57	9			6	3	56	56	6	63	3		
18	5	18	45	3	5	58	0			6	4	28	23	2	63	4		
19	5	19	16	30	2	58	2			6	4	59	49	9	63	6		
20	5	19	47	56	8	58	4	23	5	6	5	31	16	5	63	8	25	7
21	5	20	19	23	5	58	6			6	6	2	43	2	64	0		
22	5	20	50	50	1	58	8			6	6	34	9	8	64	2		
23	5	21	22	16	8	58	9			6	7	5	36	5	64	3		
24	5	21	53	43	5	59	1			6	7	37	3	1	64	5		
25	5	22	25	10	1	59	3	23	9	6	8	8	29	8	64	7	26	0
26	5	22	56	36	7	59	5			6	8	39	56	4	64	9		
27	5	23	28	3	4	59	7			6	9	11	23	1	65	1		
28	5	23	59	30	1	59	8			6	9	42	49	8	65	2		
29	5	24	30	56	7	60	0			6	10	14	16	4	65	4		
30	5	25	2	23	4	60	2	24	2	6	10	45	43	1	65	6		
31										6	11	17	9	7	65	8	26	4

TABULÆ MARTIS.

Motus medius ♂ pro Horis, Minutis, et Secundis.

Hor.	M. S. D.	Min.	M. S. D.	Min.	M. S. D.	Sec.	S. D.
1	1 18 6	1	0 1 3	31	0 40 6	5	0 1
2	2 37 2	2	0 2 6	32	0 41 9	10	0 2
3	3 55 8	3	0 3 9	33	0 43 2	15	0 3
4	5 14 4	4	0 5 2	34	0 44 5	20	0 4
5	6 33 0	5	0 6 5	35	0 45 8	25	0 5
6	7 51 6	6	0 7 8	36	0 47 1	30	0 7
7	9 10 2	7	0 9 1	37	0 48 4	35	0 8
8	10 28 8	8	0 10 4	38	0 49 7	40	0 9
9	11 47 4	9	0 11 7	39	0 51 0	45	1 0
10	13 6 0	10	0 13 1	40	0 52 4	50	1 1
11	14 24 6	11	0 14 4	41	0 53 7	55	1 2
12	15 43 3	12	0 15 7	42	0 55 0	60	1 3
13	17 1 9	13	0 17 0	43	0 56 3		
14	18 20 5	14	0 18 3	44	0 57 6		
15	19 39 1	15	0 19 6	45	0 58 9		
16	20 57 7	16	0 20 9	46	1 0 2		
17	22 16 3	17	0 22 2	47	1 1 5		
18	23 34 9	18	0 23 5	48	1 2 8		
19	24 53 5	19	0 24 8	49	1 4 1		
20	26 12 1	20	0 26 1	50	1 5 5		
21	27 30 7	21	0 27 5	51	1 6 8		
22	28 49 3	22	0 28 8	52	1 8 1		
23	30 8 0	23	0 30 1	53	1 9 4		
24	31 26 7	24	0 31 4	54	1 10 7		
		25	0 32 7	55	1 12 0		
		26	0 34 0	56	1 13 3		
		27	0 35 3	57	1 14 6		
		28	0 36 6	58	1 15 9		
		29	0 37 9	59	1 17 2		
		30	0 39 3	60	1 18 6		

TABULÆ MARTIS.

Aequatio Centri ♂ ad annum 1800.

Argumentum Anomalia media ♂

	O —	Diff.	Var.sec. —	I. —	Diff.	Var.sec. —	
Gr.	G. M. S. D.	M. S. D.	S. C.	G. M. S. D.	M. S. D.	S. C.	
0	0 0 0 0	10 0 6	0 00	4 50 39 0	8 59 9	15 07	30
1	0 10 0 6	10 0 9	0 51	4 59 38 9	8 56 2	15 54	29
2	0 20 1 5	10 0 7	1 03	5 8 35 1	8 52 1	16 02	28
3	0 30 2 2	10 0 2	1 54	5 17 27 2	8 47 7	16 49	27
4	0 40 2 4	9 59 3	2 06	5 26 14 9	8 42 9	16 96	26
5	0 50 1 7	9 58 6	2 57	5 34 57 8	8 38 3	17 43	25
6	1 0 0 3	9 58 2	3 08	5 43 36 1	8 33 9	17 89	24
7	1 9 58 5	9 57 5	3 60	5 52 10 0	8 29 2	18 35	23
8	1 19 56 0	9 56 3	4 11	6 0 39 2	8 24 1	18 81	22
9	1 29 52 3	9 54 7	4 63	6 9 3 3	8 18 7	19 26	21
10	1 39 47 0	9 53 4	5 14	6 17 22 9	8 13 4	19 71	20
11	1 49 40 4	9 52 5	5 65	6 25 35 4	8 8 4	20 17	19
12	1 59 32 9	9 50 9	6 16	6 33 43 8	8 3 1	20 62	18
13	2 9 23 8	9 49 2	6 66	6 41 46 9	7 57 3	21 07	17
14	2 19 13 0	9 46 8	7 17	6 49 44 2	7 51 1	21 52	16
15	2 28 59 8	9 44 9	7 68	6 57 35 3	7 45 2	21 91	15
16	2 38 44 7	9 43 1	8 18	7 5 20 5	7 39 4	22 34	14
17	2 48 27 8	9 41 2	8 68	7 12 59 9	7 33 6	22 76	13
18	2 58 9 0	9 38 7	9 19	7 20 33 5	7 27 3	23 19	12
19	3 7 47 7	9 35 9	9 69	7 28 0 8	7 20 4	23 60	11
20	3 17 23 6	9 33 2	10 19	7 35 21 2	7 13 8	24 02	10
21	3 26 56 8	9 30 8	10 68	7 42 35 0	7 7 5	24 43	9
22	3 36 27 6	9 28 2	11 19	7 49 42 5	7 0 8	24 83	8
23	3 46 55 8	9 25 0	11 67	7 56 43 3	6 53 8	25 23	7
24	3 55 20 8	9 21 4	12 17	8 3 37 1	6 46 3	25 63	6
25	4 4 42 2	9 18 2	12 66	8 10 23 4	6 39 1	26 02	5
26	4 14 0 4	9 15 1	13 14	8 17 2 5	6 32 2	26 40	4
27	4 23 15 5	9 11 8	13 62	8 23 34 7	6 24 8	26 79	3
28	4 32 27 3	9 7 9	14 11	8 29 59 5	6 17 1	27 17	2
29	4 41 35 2	9 3 8	14 59	8 36 16 6	6 9 1	27 54	1
30	4 50 39 0		15 07	8 42 25 7		27 91	0
	XI. +	Diff.	+	X. +	Diff.	+	Gr.

TABULÆ MARTIS.

Aequatio Centri ♂ ad annum 1800.

Argumentum Anomalia media ♂

Gr.	II. — G. M. S. D.	Diff. M. S. D.	Var. fec. — S. C.	III. — G. M. S. D.	Diff. M. S. D.	Var. fec. — S. C.	
0	8 42 25 7	6 1 2	27 91	10 37 14 8	1 11 0	35 98	30
1	8 48 26 9	5 53 4	28 28	10 38 25 8	1 0 0	36 13	29
2	8 54 20 3	5 45 9	28 64	10 39 25 8	0 48 7	36 26	28
3	9 0 6 2	5 37 3	28 99	10 40 14 5	0 37 1	36 38	27
4	9 5 43 5	5 28 6	29 34	10 40 51 6	0 25 3	36 50	26
5	9 11 12 1	5 20 2	29 68	10 41 16 9	0 13 7	36 60	25
6	9 16 32 3	5 11 9	30 02	10 41 30 6	0 2 1	36 69	24
7	9 21 44 2	5 3 3	30 35	10 41 32 7	0 9 6	36 73	23
8	9 26 47 5	4 54 4	30 67	10 41 23 1	0 21 4	36 85	22
9	9 31 41 9	4 45 1	30 99	10 41 1 7	0 33 6	36 91	21
10	9 36 27 0	4 36 0	31 30	10 40 28 1	0 45 6	36 96	20
11	9 41 3 0	4 27 2	31 60	10 39 42 5	0 57 4	37 00	19
12	9 45 30 2	4 17 9	31 90	10 38 45 1	1 9 5	37 02	18
13	9 49 48 1	4 8 4	32 19	10 37 35 6	1 21 7	37 03	17
14	9 53 56 5	3 58 5	32 48	10 36 13 9	1 34 0	37 03	16
15	9 57 55 0	3 48 9	32 75	10 34 39 9	1 46 3	37 02	15
16	10 1 43 9	3 39 4	33 03	10 32 53 6	1 58 5	37 00	14
17	10 5 23 3	3 29 6	33 29	10 30 55 1	2 10 7	36 96	13
18	10 9 52 9	3 19 5	33 55	10 28 44 4	2 23 1	36 91	12
19	10 12 12 4	3 9 1	33 80	10 26 21 3	2 35 6	36 85	11
20	10 15 21 5	2 58 8	34 04	10 23 45 7	2 48 1	36 78	10
21	10 18 20 3	2 48 9	34 27	10 20 57 6	3 0 4	36 69	9
22	10 21 9 2	2 38 5	34 50	10 17 57 2	3 12 9	36 59	8
23	10 23 47 7	2 27 8	34 71	10 14 44 3	3 25 3	36 48	7
24	10 26 15 5	2 16 9	34 92	10 11 19 0	3 37 8	36 35	6
25	10 28 32 4	2 6 1	35 12	10 7 41 2	3 50 3	36 21	5
26	10 30 38 5	1 55 6	35 31	10 3 50 9	4 2 8	36 05	4
27	10 32 34 1	1 44 8	35 50	9 59 48 1	4 15 3	35 88	3
28	10 34 18 9	1 33 7	35 67	9 55 32 8	4 27 7	35 70	2
29	10 35 52 6	1 22 2	35 83	9 51 5 1	4 40 0	35 51	1
30	10 37 14 8		35 98	9 46 25 1		35 30	0
	IX. +	Diff.	+	VIII. +	Diff.	+	Gr.

TABULÆ MARTIS.

Aequatio Centri ♂ ad annum 1800.

Argumentum Anomaliæ mediæ ♂

	IV. —	Diff.	Var.ſec. —	V. —	Diff.	Var.ſec. —
Gr.	G. M. S. D.	M. S. D.	S. C.	G. M. S. D.	M. S. D.	S. C.
0	9 46 25 1	4 52 5	35 30	5 55 35 9	10 22 7	22 46
1	9 41 32 6	5 5 0	35 07	5 45 13 2	10 32 1	21 82
2	9 36 27 6	5 17 3	34 84	5 34 41 1	10 40 6	21 18
3	9 31 10 3	5 29 5	34 58	5 24 0 5	10 48 4	20 52
4	9 25 40 8	5 41 7	34 32	5 13 12 1	10 55 5	19 86
5	9 19 59 1	5 53 9	34 04	5 2 16 6	11 3 2	19 19
6	9 14 5 2	6 6 3	33 74	4 51 13 4	11 11 0	18 50
7	9 7 58 9	6 1 3	33 43	4 40 2 4	11 18 8	17 81
8	9 1 40 6	6 30 3	33 11	4 28 43 6	11 25 2	17 10
9	8 55 10 3	6 42 0	32 77	4 17 18 4	11 30 8	16 39
10	8 48 28 3	6 53 9	32 42	4 5 47 6	11 37 2	15 67
11	8 41 34 4	7 5 9	32 05	3 54 10 4	11 44 0	14 94
12	8 34 28 5	7 17 7	31 67	3 42 26 4	11 49 9	14 20
13	8 27 10 8	7 28 9	31 27	3 30 36 5	11 55 1	13 46
14	8 19 41 9	7 40 4	30 86	3 18 41 4	11 59 3	12 71
15	8 12 1 5	7 51 6	30 44	3 6 42 1	12 4 1	11 95
16	8 4 9 9	8 3 1	30 00	2 54 38 0	12 9 5	11 18
17	7 56 6 8	8 14 4	29 55	2 42 28 5	12 14 0	10 41
18	7 47 52 4	8 25 1	29 08	2 30 14 5	12 17 7	9 63
19	7 39 27 3	8 35 5	28 0	2 17 56 8	12 20 5	8 85
20	7 30 51 8	8 46 2	28 11	2 5 36 3	12 23 9	8 06
21	7 22 5 6	8 57 1	27 60	1 53 12 4	12 27 4	7 26
22	7 13 8 5	9 7 8	27 09	1 40 45 0	12 30 1	6 47
23	7 4 0 7	9 17 6	26 55	1 28 14 9	12 32 2	5 67
24	6 54 43 1	9 27 0	26 01	1 15 42 7	12 33 9	4 87
25	6 45 16 1	9 36 9	25 45	1 3 8 8	12 35 7	4 0
26	6 35 39 2	9 47 0	24 88	1 50 33 1	12 37 1	3 2
27	6 25 52 2	9 56 7	24 29	0 37 56 0	12 38 1	2 4
28	6 15 55 5	10 5 6	23 70	0 25 17 9	12 38 7	1 6
29	6 5 49 9	10 14 0	23 09	0 12 39 2	12 39 2	0 8
30	5 55 35 9		22 46	0 0 0 0		0 0
	VII. +	Diff.	+	VI. +	Diff.	+

TABULÆ MARTIS.

Logarithmi radii vectoris ♂ ad annum 1800.

Argumentum Anomalia media ♂

Gr.	O	Diff.	Var.fec. +	I.	Diff.	Var.fec. +	
0	5 221604	5	35 2	5 217390	283	32 1	30
1	221599	14	35 2	217107	292	31 9	29
2	221585	23	25 2	216815	301	31 7	28
3	221562	33	35 2	216514	310	31 5	27
4	221529	43	35 2	216204	319	31 3	26
5	221486	52	35 1	215885	327	31 0	25
6	221434	61	35 1	215558	336	30 8	24
7	221373	70	35 1	215222	345	30 5	23
8	221303	81	35 0	214877	353	30 3	22
9	221222	90	35 0	214524	362	30 0	21
10	221132	99	34 9	214162	371	29 7	20
11	221033	108	34 9	213791	379	29 4	19
12	220925	118	34 8	213412	388	29 1	18
13	220807	127	34 8	213024	397	28 8	17
14	220680	136	34 7	212627	405	28 5	16
15	220544	145	34 6	212222	412	28 2	15
16	220399	155	34 5	211810	421	27 9	14
17	220244	164	34 4	211389	430	27 6	13
18	220080	174	34 3	210959	437	27 3	12
19	219906	183	34 2	210522	446	27 0	11
20	219723	193	34 0	210076	453	26 6	10
21	219530	201	33 9	209623	462	26 3	9
22	219329	210	33 7	209161	469	25 9	8
23	219119	220	33 5	208692	477	25 5	7
24	218899	230	33 3	208215	486	25 1	6
25	218669	238	33 1	207729	492	24 7	5
26	218431	246	32 9	207237	500	24 3	4
27	218165	256	32 7	206737	508	23 9	3
28	217929	265	32 5	206229	515	23 5	2
29	217664	274	32 3	205714	523	23 1	1
30	217390		32 1	205191		22 6	0
	XI.	Diff.	+	X.	Diff.	+	

TABULÆ MARTIS.

Logarithmi radii vectoris ♂ ad annum 1800.

Argumentum Anomaliæ media ♂

Gr.	II.	Diff.	Var. sec. +	III.	Diff.	Var. sec. ±
0	5 205191	529	22 6	5 186634	693	6 7
1	204662	537	22 2	185941	696	6 1
2	204125	544	21 7	185245	699	5 5
3	203581	551	21 3	184546	702	4 9
4	203030	558	20 9	183844	705	4 3
5	202472	564	20 4	183139	707	3 6
6	201908	570	19 9	182432	710	3 0
7	201338	578	19 4	181722	711	2 4
8	200760	585	18 9	181011	713	1 7
9	200175	591	18 4	180298	715	1 1
10	199584	597	17 9	179583	716	0 4
11	198987	603	17 4	178867	716	0 3
12	198384	610	16 9	178151	718	1 0
13	197774	615	16 3	177433	718	1 7
14	197159	620	15 8	176715	718	2 4
15	196539	626	15 2	175997	719	3 2
16	195913	631	14 7	175278	720	3 9
17	195282	637	14 1	174558	718	4 7
18	194645	643	13 6	173840	718	5 4
19	194002	648	13 1	173122	717	6 1
20	193354	652	12 5	172405	716	6 9
21	192702	656	12 0	171689	715	7 6
22	192046	662	11 4	170974	714	8 4
23	191384	667	10 8	170260	712	9 1
24	190717	671	10 2	169548	709	9 8
25	190046	674	9 6	168839	706	10 6
26	189372	678	9 1	168133	704	11 3
27	188694	683	8 5	167429	702	12 0
28	188011	687	7 9	166727	699	12 8
29	187324	690	7 3	166028	696	13 5
30	186634		6 7	165332		14
	IX.	Diff.	+	VIII.	Diff.	±

TABULÆ MARTIS.

Logarithmi radii vectoris ♂ ad annum 1800.

Argumentum Anomalia media ♂

Gr.	IV.	Diff.	Var. sec. —	V.	Diff.	Var. sec. —	
0	5 165332	691	14 2	5 147503	446	34 0	30
1	164641	688	14 9	147057	433	34 5	29
2	163953	684	15 6	146624	421	35 0	28
3	163269	679	16 3	146203	407	35 0	27
4	162590	673	17 0	145796	393	36 0	26
5	161917	668	17 7	145403	380	36 4	25
6	161249	663	18 4	145023	367	36 8	24
7	160586	658	19 2	144656	353	37 2	23
8	159928	651	19 9	144303	339	37 7	22
9	159277	646	20 6	143964	324	38 1	21
10	158631	639	21 3	143640	310	38 5	20
11	157992	632	22 0	143330	296	38 9	19
12	157360	624	22 7	143034	280	39 2	18
13	156736	617	23 4	142754	264	39 5	17
14	156119	610	24 1	142490	250	39 8	16
15	155509	602	24 8	142240	235	40 1	15
16	154907	593	25 5	142005	219	40 4	14
17	154314	584	26 1	141786	203	40 7	13
18	153730	574	26 8	141583	188	40 9	12
19	153156	566	27 4	141395	172	41 1	11
20	152590	556	28 1	141223	155	41 4	10
21	152034	546	28 7	141068	139	41 6	9
22	151488	537	29 4	140929	124	41 7	8
23	150951	526	30 0	140805	107	41 9	7
24	150425	515	30 6	140698	91	42 1	6
25	149910	504	31 2	140607	74	42 2	5
26	149406	494	31 8	140533	58	42 3	4
27	148912	482	32 3	140475	41	42 4	3
28	148430	470	32 9	140434	25	42 5	2
29	147960	457	33 5	140409	8	42 5	1
30	147503		34 0	140401		42 5	0
	VII.	Diff.	—	VI.	Diff.	—	Gr.

TABULÆ MARTIS.

Latitudo heliocentrica ♂

Argument. latit. = *longit. in orbita* — *long. Nodi.*

Gr.	○ B / VI. A G. M. S. D.	Diff. M.S.D	I. B / VII. A G. M. S. D.	Diff. M. S.D	II. B / VIII. A G. M. S. D.	Diff. M.S.D	
0	0 0 0 0	1 56 4	0 55 32 1	1 40 2	1 36 11 8	0 57 3	30
1	0 1 56 4	1 56 3	0 57 12 3	1 39 1	1 37 9 1	0 55 5	29
2	0 3 52 7	1 56 1	0 58 51 4	1 38 1	1 38 4 6	0 53 7	28
3	0 5 48 8	1 56 1	1 0 29 5	1 37 0	1 38 58 3	0 51 9	27
4	0 7 44 9	1 55 9	1 2 6 5	1 35 9	1 39 50 2	0 50 1	26
5	0 9 40 8	1 55 8	1 3 42 4	1 34 7	1 40 40 3	0 48 2	25
6	0 11 36 6	1 55 6	1 5 17 1	1 33 5	1 41 28 5	0 46 4	24
7	0 13 32 2	1 55 3	1 6 50 6	1 32 3	1 42 14 9	0 44 6	2
8	0 15 27 5	1 55 0	1 8 22 9	1 31 0	1 42 59 5	0 42 7	2
9	0 17 22 5	1 54 7	1 9 53 9	1 29 8	1 43 42 2	0 40 7	1
10	0 19 17 2	1 54 3	1 11 23 7	1 28 2	1 44 22 9	0 38 8	2
11	0 21 11 5	1 53 9	1 12 52 2	1 27 2	1 45 1 7	0 36 9	1
12	0 23 5 4	1 53 6	1 14 19 4	1 25 8	1 45 38 6	0 35 0	
13	0 24 59 0	1 53 1	1 15 45 2	1 24 3	1 46 13 6	0 33 1	
14	0 26 52 1	1 52 6	1 17 9 5	1 23 0	1 46 46 7	0 31 1	
15	0 28 44 7	1 52 1	1 18 32 5	1 21 5	1 47 17 8	0 29 1	
16	0 30 36 8	1 51 5	1 19 54 0	1 20 1	1 47 46 9	0 27 2	
17	0 32 28 3	1 51 0	1 21 14 1	1 18 6	1 48 14 1	0 25 2	
18	0 34 19 3	1 50 3	1 22 32 7	1 17 1	1 48 39 3	0 23 2	
19	0 36 9 6	1 49 6	1 23 49 8	1 15 5	1 49 2 5	0 21 2	
20	0 37 59 2	1 48 9	1 25 5 3	1 14 0	1 49 23 7	0 19 2	
21	0 39 48 1	1 48 2	1 26 19 3	1 12 5	1 49 42 9	0 17 2	
22	0 41 36 3	1 47 5	1 27 31 8	1 10 8	1 50 0 1	0 15 2	
23	0 43 23 8	1 46 7	1 28 42 6	1 9 2	1 50 15 2	0 13	
24	0 45 10 5	1 45 9	1 29 51 8	1 7 6	1 50 28 4	0 11	
25	0 46 56 4	1 45 0	1 30 59 4	1 5 9	1 50 39 6	0 9	
26	0 48 41 4	1 44 1	1 32 5 3	1 4 2	1 50 48 8	0 7	
27	0 50 25 5	1 43 2	1 33 9 5	1 2 5	1 50 55 9	0 5	
28	0 52 8 7	1 42 2	1 34 12 0	1 0 8	1 51 1 0	0 3	
29	0 53 50 9	1 41 2	1 35 12 8	0 59 0	1 51 4 0	0 1	
30	0 55 32 1		1 36 11 8		1 51 5 0		
	XI. A / V. B	Diff.	X. A / IV. B	Diff.	IX. A / III. B	Diff	

TABULÆ MARTIS.

Reductio longit. ad Eclipt., et Diminutio logarithm. rad. vect.

Argument. latit. = longit. in orbita — long. Nodi.

Gr.	○ VI. — S. D.	Dim. log.	I. VII. — S. D.	Dim. log.	II. VIII. — S. D.	Dim. log.	
0	0 0	0	46 6	57	46 6	170	30
1	1 9	0	47 5	61	45 6	173	29
2	3 8	0	48 4	64	44 6	176	28
3	5 7	1	49 2	68	43 5	180	27
4	7 5	1	49 9	72	42 4	183	26
5	9 3	2	50 6	76	41 2	186	25
6	11 2	3	51 2	79	40 0	189	24
7	13 0	3	51 7	83	38 7	192	23
8	14 8	4	52 2	87	37 4	195	22
9	16 6	5	52 6	90	36 0	198	11
10	18 4	7	53 0	94	34 6	200	20
11	20 1	8	53 3	98	33 1	203	19
12	21 8	10	53 5	102	31 6	205	18
13	23 5	11	53 7	106	30 1	207	17
14	25 2	13	53 8	110	28 5	209	16
15	26 9	15	53 9	114	26 9	211	15
16	28 5	17	53 8	118	25 2	213	14
17	30 1	19	53 7	121	23 5	215	13
18	31 6	21	53 5	125	21 8	217	12
19	33 1	24	53 3	129	20 1	219	11
20	34 6	27	53 0	133	18 4	220	10
21	36 0	29	52 6	137	16 6	221	9
22	37 4	32	52 2	140	14 8	222	8
23	38 7	35	51 7	145	13 0	223	7
24	40 0	38	51 2	149	11 2	224	6
25	41 2	41	50 6	152	9 3	225	5
26	42 4	44	49 9	156	7 5	225	4
27	43 5	47	49 2	159	5 7	226	3
28	44 6	50	48 4	163	3 8	226	2
29	45 6	54	47 5	167	1 9	227	1
30	46 6	57	46 6	170	0 0	227	0
	XI. + V.	Dim. log.	X. + IV.	Dim. log.	IX. + III.	Dim. log.	Gr.

Paradigma Calculi

Obſervata eſt anno 1790. Grenovici die 12. Febr. $12^h 8' 10''$ t. med. vel $12^h 17' 31''$ t. m. Pariſ. longitudo Martis geoc. vera $4^s 21° 19' 49'' 6$; lat. geoc. ver. $4° 31' 44'' 9$.

	Long. med.	Aphel.	Nodus
1780	$0^s\ 4° 45' 11'' 5$	$5^s\ 2°\ 0'\ 39'' 5$	$1^s\ 17° 51' 26'' 0$
10	3 23 54 29 7	10 58 0	4 24 6
12 Febr.	0 22 32 6 2	7 7	3 0
12^h	15 43 3	5 2 11 45 2	1 17 55 53 6
$17'$	22 2	4 21 27 53 6	4 23 14 50 0
$31''$	0 7	11 19 16 8 4	3 5 18 56 4
		Anom. med.	Arg. lat.

Long. med.	4 21 27 53 6
aequ. Centr.	+ 1 47 0 9
Var. ſec.	— 0 5
perturb.	— 4 0
Long.. in orb.	4 23 14 50 0
red.	+ 9 9
Long. in ecl.	4 23 14 59 9
Long. ☉	10 24 33 49 5
Commut.	5 28 41 10 4
Semiſum.	2 29 20 35 2
Semidiff.	2 27 25 16 1
Elong.	+ 5 26 45 51 3
Long. geoc.	4 21 19 40 8
obſ.	4 21 19 49 6
Error tab.	— 8 8
Log. ſin. Elong.	8,751620
Log. ſin. Comm.	8,360351
	0,391269
Tang. lat. hel.	8,507635
Tang. lat. geoc.	8,898904
	$4° 31' 48'' 7$
obſ.	4 31 44 9
Error tab.	+ 3 8

Lat. ♂ hel.	$1° 50' 36'' 1$ B
Log. rad. vect.	5,221061
Var. ſec.	— 3
pert.	+ 21
red.	225
	5,220854
Log. diſt. ☉	— 4,994779
Tang. $59° 16' 54'' 1$	= 0,226075
— 45	
Tang. 14 16 54 1	9,405784
Tang. Semiſ.	1,940612
Tang. Semid.	1,346396

Perturbationes pro longitudine.

Arg.		
I.	502	+ $0'' 1$
II.	012	+ 1 0
III.	523	— 1 1
IV.	961	+ 1 4
V.	987	+ 0 6
VI.	998	— 0 1
VII.	515	— 2 0
VIII.	660	— 3 1
IX.	461	— 0 8
		— 4 0

Pro log. rad. vect.

III.	523	+ 6 7
VI.	998	+ 1 3
VII.	515	+ 17 3
	Summa	+ 25 3
	e tab. ult. fact.	0 83
		+ 21 0

PERTURBATIONES MARTIS.

Argumenta Perturbationum ♂

Anni	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.
B 1500	653	630	056	198	147	222	194	206	453
B 1600	471	965	539	867	193	947	491	634	331
C 1700	301	302	032	540	240	683	797	064	233
B 1720	666	569	131	075	850	630	058	750	814
B 1740	033	837	230	609	460	578	320	436	394
B 1760	399	104	328	144	066	525	581	122	976
B 1780	765	371	427	678	678	473	842	808	557
C 1800	131	639	525	213	287	419	103	494	135
1801	599	702	930	340	317	866	466	578	113
1802	067	766	334	466	348	313	829	662	092
1803	535	829	739	593	378	760	192	747	070
B 1804	004	892	145	720	409	208	555	831	051
1805	472	955	549	847	439	655	918	915	030
1806	940	019	954	973	470	102	281	999	008
1807	408	082	359	100	500	549	644	084	986
B 1808	877	146	765	227	531	998	007	168	967
1809	345	209	170	354	561	445	370	252	946
1810	813	273	574	480	592	892	733	336	924
1811	281	336	979	607	622	339	096	421	902
B 1812	750	399	384	734	653	787	459	505	884
1813	218	462	789	861	683	234	822	589	862
1814	686	526	193	987	714	681	185	673	840
1815	154	589	598	114	744	128	548	758	819
B 1816	623	653	004	241	775	577	911	842	800
1817	091	716	409	368	805	024	274	926	778
1813	559	780	814	494	836	471	637	010	756
1819	027	843	219	621	867	918	000	095	735
B 1820	496	906	624	748	896	366	364	180	716
1821	964	969	029	875	926	813	727	264	694
1822	432	033	433	001	957	260	090	348	673
1823	900	096	838	128	987	707	453	433	651

PERTURBATIONES MARTIS.

Argumenta Perturbationum ♂

Anni	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.
1	468	063	405	127	030	447	363	084	978
2	936	127	809	253	061	894	726	168	957
3	404	190	214	380	091	341	089	253	935
B 4	873	253	620	507	122	789	452	337	916
5	341	316	024	634	152	236	815	421	895
6	809	380	429	760	183	683	178	505	873
7	277	443	834	887	213	130	541	590	851
B 8	746	507	240	014	244	579	904	674	832
9	214	570	645	141	274	026	267	758	811
10	682	634	049	267	305	473	630	842	789
11	150	697	454	394	335	920	993	927	767
B 12	619	760	859	521	366	368	356	011	749
13	087	823	264	648	396	815	719	095	72
14	555	887	668	774	427	262	082	179	70
15	023	950	073	901	457	709	445	264	68
B 16	492	014	479	028	488	158	808	348	66
17	960	077	884	155	518	605	171	432	6
18	428	141	289	281	549	052	534	516	6
19	896	204	694	408	579	499	897	601	6
B 20	366	267	099	535	609	947	261	686	5
B 40	732	535	198	069	219	895	523	372	1
B 60	098	802	296	604	828	842	784	058	
B 80	464	069	395	138	438	790	045	744	
B 100	831	337	494	673	047	737	307	430	
C 100	830	337	493	673	047	736	306	430	

PERTURBATIONES MARTIS.

Argumenta Perturbationum ♂ pro initio cujusque menfis.

Menfis	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.
Januar	000	000	000	000	000	000	000	000	000
Febr.	040	005	034	011	003	038	031	007	083
Mart.	076	010	065	020	005	072	059	014	158
April	115	016	100	031	007	110	089	021	241
Maj.	154	021	133	042	010	147	119	028	322
Jun.	194	026	168	053	013	185	150	035	405
Jul.	232	032	201	062	015	221	180	042	485
Aug.	272	037	235	074	018	260	211	049	568
Sept.	312	042	270	084	020	298	241	056	651
Oct.	350	047	303	095	023	334	271	063	731
Nov.	390	053	337	106	025	372	302	071	815
Dec.	428	058	370	116	028	409	332	077	895

PERTURBATIONES MARTIS.

Argument. Perturb. ♂ pro mensium diebus.

Dies	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.
1	001	000	001	000	000	001	001	000	003
2	002	000	002	001	000	002	002	000	005
3	003	000	003	001	000	004	003	000	008
4	004	001	004	002	000	005	004	001	010
5	006	001	005	002	000	006	005	001	013
6	007	001	006	002	001	008	006	001	015
7	008	001	007	003	001	009	007	001	018
8	009	002	008	003	001	010	008	002	021
9	011	002	009	004	001	011	009	002	024
10	013	002	011	004	001	012	010	002	027
11	014	002	012	004	001	013	011	002	029
12	015	002	013	005	001	014	012	003	032
13	017	002	014	005	002	016	013	003	035
14	018	003	015	005	002	017	014	003	037
15	019	003	016	006	002	018	015	003	03
16	021	003	017	006	002	020	016	004	04
17	023	003	018	006	002	021	017	004	04
18	024	003	019	007	002	022	018	004	04
19	025	003	020	007	002	024	019	005	05
20	026	003	022	007	002	025	020	005	05
21	027	004	023	008	002	026	021	005	05
22	028	004	024	008	002	027	022	005	05
23	029	004	025	008	003	029	023	006	0
24	030	004	026	009	003	030	024	006	0
25	031	004	027	009	003	031	025	006	0
26	033	005	028	010	003	033	026	006	0
27	034	005	030	010	093	034	027	007	0
28	036	005	031	010	003	035	028	007	[illegible]
29	037	005	032	011	003	036	029	007	[illegible]
30	039	005	033	011	003	037	030	007	[illegible]
31	040	005	034	011	003	038	031	007	[illegible]

Annis biſſext. menſibus Januar. et Febr. numerus die[illegible] unitate minuitur.

Æquationes perturbationum Martis.

Arg. I. = ☉ − ♂

N.	0 −	100 −	200 −	300 −	400 −	
0	0″0	5″0	7″2	6″1	3″2	100
10	0 6	5 4	7 2	5 9	2 9	90
20	1 1	5 8	7 2	5 6	2 6	80
30	1 7	6 1	7 1	5 3	2 3	70
40	2 2	6 4	7 1	5 0	1 9	60
50	2 7	6 6	7 0	4 7	1 6	50
60	3 2	6 8	6 9	4 4	1 3	40
70	3 7	7 0	6 7	4 1	1 0	30
80	4 2	7 1	6 5	3 8	0 6	20
90	4 6	7 2	6 3	3 5	0 3	10
100	5 0	7 2	6 1	3 2	0 0	0
	+ 900	+ 800	+ 700	+ 600	+ 500	N.

Arg. II. = 44°47′40″ + 2 ♂ − ☉

N.	0 +	100 +	200 +	300 +	400 +	
0	0″0	8″1	13″2	13″2	8″1	100
10	0 9	8 8	13 4	12 9	7 4	90
20	1 7	9 5	13 6	12 5	6 7	80
30	2 6	10 1	13 7	12 1	5 9	70
40	3 4	10 7	13 8	11 7	5 1	60
50	4 3	11 2	13 8	11 2	4 3	50
60	5 1	11 7	13 8	10 7	3 4	40
70	5 9	12 1	13 7	10 1	2 6	30
80	6 7	12 5	13 6	9 5	1 7	20
90	7 4	12 9	13 4	8 8	0 9	10
100	8 1	13 2	13 2	8 1	0 0	0
	− 900	− 800	− 700	− 600	− 500	N.

Arg. III. $= 2 \odot - 3 ♂ - 33°4'10''$

N.	0 +	100 +	200 +	300 +	400 +	
0	0″0	4″1	6″7	6″7	4″1	100
10	0 5	4 5	6 8	6 6	3 8	90
20	0 9	4 8	6 9	6 4	3 4	80
30	1 4	5 1	7 0	6 2	3 0	70
40	1 8	5 4	7 0	6 0	2 6	60
50	2 2	5 7	7 1	5 7	2 2	50
60	2 6	6 0	7 0	5 4	1 8	40
70	3 0	6 2	7 0	5 1	1 4	30
80	3 4	6 4	6 9	4 8	0 9	20
90	3 8	6 6	6 8	4 5	0 5	10
100	4 1	6 7	6 7	4 1	0 0	0
	— 900	— 800	— 700	— 600	— 500	N.

Arg. IV. $= 66°3'30'' + 4 ♂ - 2 \odot$

N.	0 —	100 —	200 —	300 —	400 —	
0	0″0	3″2	5″2	5″2	3″2	100
10	0 4	3 5	5 3	5 1	2 9	90
20	0 7	3 7	5 4	4 9	2 6	80
30	1 1	4 0	5 4	4 8	2 3	70
40	1 4	4 2	5 5	4 6	2 0	60
50	1 7	4 4	5 5	4 4	1 7	50
60	2 0	4 6	5 5	4 2	1 4	4
70	2 3	4 8	5 4	4 0	1 1	3
80	2 6	4 9	5 4	3 7	0 7	2
90	2 9	5 1	5 3	3 5	0 4	1
100	3 2	5 2	5 2	3 2	0 0	
	+ 900	+ 800	+ 700	+ 600	+ 500	N

Arg. V. = ♀ − 3 ♂ − 64″9.

N.	0 +	100 +	200 +	300 +	400 +	
0	0″0	4″4	7″3	7″3	4″4	100
10	0 5	4 8	7 4	7 1	4 0	90
20	0 9	5 1	7 5	6 9	3 6	80
30	1 4	5 5	7 5	6 7	3 2	70
40	1 8	5 9	7 6	6 5	2 7	60
50	2 3	6 2	7 6	6 2	2 3	50
60	2 7	6 5	7 6	5 9	1 8	40
70	3 2	6 7	7 5	5 5	1 4	30
80	3 6	6 9	7 5	5 1	0 9	20
90	4 0	7 1	7 4	4 8	0 5	10
100	4 4	7 3	7 3	4 4	0 0	0
	− 900	− 800	− 700	− 600	− 500	N.

Arg. VI = ♂ − ♃

N.	0 ±	100 −	200 −	300 −	400 −	
0	0″0	0″3	15″9	31″9	26″2	100
10	0 4	1 2	17 9	32 4	24 2	90
20	0 8	2 2	20 0	32 9	22 1	80
30	1 1	3 5	22 0	33 0	19 2	70
40	1 3	4 9	23 8	32 8	17 2	60
50	1 4	6 5	25 6	32 3	14 6	50
60	1 4	8 2	27 2	31 6	11 8	40
70	1 2	10 0	28 7	30 5	8 9	30
80	0 9	11 9	30 0	29 4	6 0	20
90	0 4	14 0	31 0	27 9	3 0	10
100	0 3	15 9	31 9	26 2	0 0	0
	∓ 900	+ 800	+ 700	+ 600	+ 500	N.

Arg. VII. = ♂ — 2 ♃ — 31°59′30″

N.	0 +	100 +	200 +	300 +	400 +	
0	0″0	12″7	20″6	20″6	12″7	100
10	1 4	13 8	20 9	20 1	11 6	90
20	2 7	14 8	21 2	19 6	10 4	80
30	4 0	15 8	21 4	19 0	9 2	70
40	5 4	16 7	21 6	18 3	8 0	60
50	6 7	17 5	21 6	17 5	6 7	50
60	8 0	18 3	21 6	16 7	5 4	40
70	9 2	19 0	21 4	15 8	4 0	30
80	10 4	19 6	21 2	14 8	2 7	20
90	11 6	20 1	20 9	13 8	1 4	10
100	12 7	20 6	20 6	12 7	0 0	0
	— 900	— 800	— 700	— 600	— 500	N.

Arg. VIII. = 96°4′50″ + ♃

N.	0 +	100 +	200 +	300 +	400 +	
0	0″0	2″2	3″5	3″5	2″2	100
10	0 3	2 4	3 5	3 4	2 0	90
20	0 5	2 5	3 6	3 3	1 8	80
30	0 7	2 7	3 6	3 2	1 6	70
40	0 9	2 8	3 7	3 1	1 4	60
50	1 2	3 0	3 7	3 0	1 2	50
60	1 4	3 1	3 7	2 8	0 9	40
70	1 6	3 2	3 6	2 7	0 7	30
80	1 8	3 3	3 6	2 5	0 5	20
90	2 0	3 4	3 5	2 4	0 3	10
100	2 2	3 5	3 5	2 2	0 0	0
	— 900	— 800	— 700	— 600	— 500	N.

Arg. IX. = 25°12′10″ + 2 ♂ − ♃

N.	0 −	100 −	200 −	300 −	400 −	
0	0″0	1″8	2″9	2″9	1″8	100
10	0 2	2 0	2 9	2 8	1 7	90
20	0 4	2 1	3 0	2 7	1 5	80
30	0 6	2 2	3 0	2 7	1 3	70
40	0 8	2 3	3 0	2 6	1 1	60
50	1 0	2 5	3 0	2 5	1 0	50
60	1 1	2 6	3 0	2 3	0 8	40
70	1 3	2 7	3 0	2 2	0 6	30
80	1 5	2 7	3 0	2 1	0 4	20
90	1 7	2 8	2 9	2 0	0 2	10
100	1 8	2 9	2 9	1 8	0 0	0
	+ 900	+ 800	+ 700	+ 600	+ 500	N.

Arg. III. *Pro Logarithmo radii Vectoris.*

N.	0 −	100 −	200 ∓	300 +	400 +	
0	6 7	5 4	2 1	2 1	5 4	100
10	6 7	5 2	1 7	2 5	5 7	90
20	6 7	4 9	1 3	2 9	5 9	80
30	6 6	4 6	0 9	3 3	6 1	70
40	6 5	4 3	0 4	3 6	6 2	90
50	6 4	4 0	0 0	4 0	6 4	50
60	6 2	3 6	0 4	4 3	6 5	40
70	6 1	3 3	0 9	4 6	6 6	30
80	5 9	2 9	1 3	4 9	6 7	20
90	5 7	2 5	1 7	5 2	6 7	10
100	5 4	2 1	2 1	5 4	6 7	0
	− 900	− 800	∓ 700	+ 600	+ 500	N.

Ultima nota tum adhibetur, ubi logarithmi dist. 7 habent decimas.

In logarithmo 6 decimarum ea abjicitur.

Arg. VI.

N.	0 +	100 +	200 +	300 ±	400 −	
0	1 3	14 1	26 6	7 9	27 2	100
10	1 4	16 1	26 2	4 5	30 1	90
20	1 6	18 0	25 6	1 1	32 9	80
30	2 6	19 8	24 5	2 4	35 3	70
40	3 8	21 6	23 1	6 2	37 6	60
50	5 1	23 0	21 3	9 9	39 4	50
60	6 6	24 4	19 2	13 6	41 1	40
70	8 3	25 4	16 7	17 2	42 4	30
80	10 1	26 1	14 0	20 7	43 5	20
90	12 1	26 4	11 0	24 0	43 8	10
100	14 1	26 6	7 9	27 2	43 9	0
	+ 900	+ 800	+ 700	± 600	− 500	

Arg. VII.

N.	0 +	100 −	200 ∓	300 +	400 +	
0	17 3	14 0	5 4	5 4	14 0	100
10	17 3	13 3	4 3	6 4	14 6	90
20	17 2	12 6	3 2	7 3	15 2	80
30	17 0	11 8	2 2	8 3	15 7	70
40	16 8	11 0	1 1	9 3	16 1	60
50	16 5	10 2	0 0	10 2	16 5	50
60	16 1	9 3	1 1	11 0	16 8	40
70	15 7	8 3	2 2	11 8	17 0	30
80	15 2	7 3	3 2	12 6	17 2	20
90	14 6	6 4	4 3	13 3	17 3	10
100	14 0	5 4	5 4	14 0	17 3	0
	− 900	− 800	∓ 700	+ 600	+ 500	

Anomal. med. ♂. *Pro reductione pert. log. rad. Vectoris.*

Gr.	○	I.	II.	III.	IV.	V.	
0	0 83	0 84	0 86	0 90	0 94	0 98	30
15	0 83	0 85	0 88	0 92	0 96	0 99	15
30	0 84	0 86	0 90	0 94	0 98	1 00	0
	XI.	X.	IX.	VIII.	VII.	VI.	

COMMENTATIO IN TABULAS MARTIS PRÆMISSAS.

Postquam Orianus, Burckhardusque perturbationibus Martis ab actione vicinorum planetarum oriundis operam dedissent, æquationesque huc pertinentes publici juris fecissent; nihil mihi prius faciendum putavi, quam ut tabulas Martis, quas anno 1789 in Ephemeridibus Vindobonensibus edideram, ad fidem harum perturbationum castigatas sisterem. Poteram eum laborem tanto fidentius suscipere, quod calculos omnes observationum, quibus priores Martis tabulæ innitebantur, præ manibus haberem, oppositionesque hujus planetæ, quæ huic investigationi maxime servire poterant, exstarent illo in volumine impressæ. Numerum earum auxerunt oppositiones ex eo tempore observatæ. Prioribus autem mutationis aliquid inducendum erat; quod, cum illæ ad tabulas solares Majeri, quæ tum quidem omne pretium tulisse videbantur, fuissent exactæ, nunc ad alias exigendæ erant, quæ majorem cum cœlo consensum præbere existimantur.

Constructis itaque ex æquationibus perturbationum tabulis rem ita aggredi statueram, ut ante omnia æquationem Centri maximam investigandam sumerem; methodo Caillii usus, in commentariis Academiæ regiæ 1748 pag. 153 proposita; qua duæ observationes circa distantiam mediam deligantur, quarum æquationes Centri autem, altera sit positiva, altera negativa. Differentia longitudinum observatarum, comparata cum differentia longitudinum mediarum sub-

fubminiftrat fummam æquationum refpondentium. Quo jam e tabulis quibuscunque ad tempus utriusque obfer tionis fupputentur æquationes Centri; earumque fumm dupla æquatione maxima tabulari fubtrahatur, exceffus fummam æquationum, quam obfervationes manifeltabar additus dat duplam æquationem Centri ex obfervationit Hæc methodus etfi fummum rigorem admittere non vic tur, eo tamen rem perducere potis eft, ut æquatio Cei obtineatur, ad veram quam proxime accedens; præfer ubi plures ejusmodi comparationes ineuntur, e quibus mum medium aliquod arithmeticum deligitur. Ego hac tione quidem augmentum plane annuum æquationis c nuiffe mihi videor, theoriæ quam maxime confentiens.

Verum non pluribus opus eft. Nunc, quæ mil prima inveftigatione prodiere, in medium proferam; a affumptis perturbationibus Martis ab Oriano ftatutis i neram æquationem Centri maximam

e 5 comparationibus ad annum 1760 2 = 10° 41′ 1
ex aliis 5 comparat. — — 1777,9 = 10 41 1

Unde deducitur augmentum æquationis in 100 36″35, quam proximum illi, quod theoria fubmir 36″7.

Æquatio Centri maxima fupra inventa per m eft = 10°41′16″16, refpondens anno 1769,08: ex confequitur, æquationem Centri maximam, qualis bulis meis 1789 proponitur 10°41′1″26 anno 1728 venire.

Pari modo ex eadem prima inveftigatione patuit, lium tabularum mearum effe corrigendum; & quidem

e 4 comparationibus ad annum 1757,3 + 0′ 24″3.
e 5 — — — — 1790,6 + 1 30 0.

Unde non obfcure deducitur, motum Aphelii a in tabulis meis effe augendum 1″977; atque adeo l dinem Aphelii tabularum noftrarum convenire anno

Tandem perſequenti mihi inveſtigationem incoeptam innotuit, epocham longitudinis mediæ, qualis in tabulis meis proponitur, eſſe augendam et quidem varie pro variis temporibus: videlicet

+ 19″02 ad annum 1693,70
+ 8 34 — — 1752,24
+ 2 71 — — 1787,80

Unde obtinetur diminutio motus in longitudine in 100 annis e comparatione 1ma — 17″33
— — 2da — 15 64
— — 3tia — 18 31
per medium — — — 17 30

Quare cum in tabulis meis anni 1789, nam ad has omnia, quæ nunc diximus referuntur, ſtatuatur motus Martis ſecularis 2ˢ1°42′25″6; erit motus is correctus 2ˢ1°42′8″3; Reſpondet igitur epocha longitudinis tabularum illarum anno 1802½.

Sed nequid intentatum relinquerem, placuit etiam perturbationes Burckhardi in hunc uſum adhibere; præſertim cum ſuperiores correctiones, quas perturbationes Oriani ſubminiſtrarunt, quibusdam oppoſitionibus non ex voto ſatisfacerent. Verum licet ſumma perturbationum Burckhardi nonnunquam in diverſum abeat ab Oriano; correctiones tamen hac altera indagatione obtinui, prioribus quam ſimillimas.

Nam æquationem Centri maximam ad annum 1769,07 deduxi 10°41′15″95; et augmentum ejusdem in 100 annis 35″5; atque adeo æquatio tabularum 1789 reſpondet anno 1729.

Deprehenſum præterea eſt, Aphelium tabularum mearum ad annum 1765,8 eſſe augendum 24″93; ſed motum ejusdem annuum 1″98. Longitudo itaque Aphelii tabularum convenit anno 1752½.

De-

Demum ulterius patuit; epocham longitudinis tabularum ad annum 1732 esse augendam 13″33‘; et 1 ejusdem secularem esse minuendum facta duplici comp: ne 20″18: quo assumpto conficitur, epocham longit tabularum respondere anno 1798.

Hæc ita se habebant; cum repente deprehensun in perturbationibus tam Oriani, quam Burckhardi, les publice propositæ erant, errores typi latere. ram igitur perdidisse videri poteram, quia necesse erat, culos perturbationum a mendis castigatarum pro quavis positione ad incudem revocare. Non tamen pœnite calculos repetere, dum spes affulgebat aliqua, ejusmodi bitæ elementa impetrare me posse, quæ observation examussim satisfaciant. Præterea aliam methodum com dii causa in usum adhibere placuit, qua omnes oppositic correctioni æquationis opportunæ in unam summam co ciuntur, per numerum observationum divisam: quo cto æquatio obtinetur duas quidem iucognitas quant res involvens; sed cum et pro correctione Aphelii si lis exsurgat æquatio easdem incognitas comprehende facta substitutione alterutrius in altera quævis incogn facile determinari poterat: videlicet correctio æquatio maximæ, et Aphelii. Ita adhibitis Oriani perturbati nibus prodiit mihi correctio æquationis maximæ tabu rum anno 1772,2 + 18″29
Correctio Aphelii 1771,7 + 35 2

Verum perturbationibus Wurmii in subsidium vocat una cum æquatione ab actione Veneris oriunda, quamqu ab Oriano petere mutuo placuit, obtinui correctionem æ quationis maximæ tabularem + 19″65
et correctionem Aphelii + 53 2
annis iisdem, uti paullo ante respondentes.

Ex his postremis correctionibus conficitur, æquationem tabularum respondere anno $1718\frac{1}{2}$; et longitudinem Aphelii tabularem convenire anno $1743\frac{1}{2}$.

Cum

Cum autem correctiones recens inventæ quibusdam oppositionibus minus satisfacerent, suspicio quædam de ipsis observationibus, unde oppositiones deductæ sunt, oborta est. Quare consultis commentariis nonnullas oppositiones deprehenso nævo corrigere datum est. Alias novis accersitis observationibus recens determinavi, uti sunt oppositiones annorum 1753 et 1755 ex observationibus Bradleji mecum per L. B. de Zach benevolentissime communicatis. Oppositio anni 1745 ex observationibus Caillii, et illa 1764 ex observationibus *le Gentil* definita est. Demum oppositionem anni 1595 ex observationibus Tychonis postliminio ad incudem revocavi, pluribus ejusdem cel. Astronomi observationibus in eam rem adhibitis, cum antea nonnisi unicam, a Cassino allatam in usum vocare licuerit. Cum autem in oppositionibus planetarum cum sole id maxime agatur, ut longitudo solis e tabulis deprompta quam fieri potest, maximum cum cælo consensum exhibeat; necesse est, ut vel ejusmodi tabulæ deligantur, quibus astronomorum judicio ea accuratio tribuitur, vel si fieri possit, ut eæ ad coævas observationes exactæ, siquid peccent, castigentur, quo certior et oppositio et longitudo planetæ obtineatur: cum inde maxime elementa orbitæ planetæ, quæ investigantur, dependere soleant.

Itaque in pluribus oppositionibus longitudines solis ex observationibus, ubi haberi poterant, castigavi, easque ubi hoc præstitum est, asterisco notavi, in oppositionum elencho, quem infra exhibebo. In reliquis locum solis e tabulis tam de Lambre, quam de Zach, adhibitis correctionibus quibusdam ad mentem auctoris excerpsi; captoque ex iis medio arithmetico tempus oppositionis longitudinemque heliocentricam Martis denuo determinavi; cum antea tabulis solis non aliis, quam nostris uti placuerit. Atque hac demum ratione ea elementa obtinuimus, e quibus tabulas præsentes Martis condidimus, quæque ab iis non multum recedunt, quæ nobis anteriores investigationes prodidere.

Nam

Nam ex perturbationibus Oriani adhibitis deprel Aphelium tabularum 1789 eſſe augendum 34''06 ; æq nem Centri maximam vero 21''919 ad annum 1772 : e conſequitur, longitudinem Aphelii, qualis in illis t exhibetur, reſpondere anno 1753½; æquationem vero tri maximam anno 1712½.

Inveneram quoque, epocham longitudinis mediæ, lis in tabulis 1789 proponitur, ſequenti modo c gendam:

ad annum	1693,70	+	12''32
—	1752,24	+	8 34
—	1787,80	+	0 45

Unde conſequitur diminutio motus ſecularis Marti longitudine —15''24; atque adeo motus ſecularis corre 2ˢ1°42'10''4.

Jam ſi correctiones inventæ ad annum 1800 reducant elementa orbitæ caſtigata ita ſe habent:

Epocha long. ♂ ſub Mer. Pariſ.	7ˢ	22°	34'	11''
— — Aphelii	5	2	22	35
— — Nodi aſc.	1	18	0	15
Mot. long. med. in 100 annis	2	1	42	10
— — Aphelii		1	49	41
Nodorum			44	6
Inclinatio orbitæ		1	51	5
Aequatio Centri maxima ad 1800		10	41	33 3
reſpondens Anomaliæ mediæ	3	6	40	45 3

Aequatio Centri per ſinum Anomaliæ mediæ = Z expreſſa

—	38413''225 ſin Z.	+	2233''290 ſin 2Z
—	180 027 ſin 3Z.	+	16 583 ſin 4Z
—	1 643 ſin 5Z.	+	0 170 ſin 6Z.

Le Français, qui et ipſe novas Martis tabulas e perturbationibus Burckhardi edidit, ſequentia ad eundem annum 1800 exhibet elementa:

Epo-

Epocha long. med. ♂	$7^s 22^\circ 34' 9''6$
— — Aphelii	5 2 23 17
— — Nodi	1 18 1 1
Mot. long. med. in 100 annis	2 1 41 50 7
— — Aphelii	1 51 40
—+ — Nodorum	— 45 33
Inclinatio orbitæ	1 51 3 5
Aequatio Centri maxima 1800	10 41 34 8

Orianus, qui in Ephemeridibus Mediolanenſibus anni 1801 nova Martis elementa dederat, a meis quoad longitudinem mediam differt $+ 1''1$; quoad longitudinem Aphelii $+40''$; et quoad longitudinem Nodi $-9''2$.

Antequnm tabulam oppoſitionum, tabularumque cum ipſis conſenſum vel diſſenſum exhibeam, ſciendum, ex eo tempore, quo tabulæ Martis ex elementis præmiſſis conditæ erant, perturbationes Martis a Schuberto Academico Petropolitano denuo ad incudem fuiſſe revocatas. Ego e magno numero æquationum ſequentes delegi, $3''$ majores, ad comparationem cum oppoſitionibus inſtituendam; Wurmius in iis hallucinationes quasdam, præcipue quoad ſigna nonnulla, detexerat; cui propterea maximam gratiam habeo. Sed per decurſum comparationum patuit, æquationem V. ab actione Veneris ortam, qualis a Schuberto proponitur $-15''72$ (ſin ♀ $-$ 3 ♂ $- 51^\circ 40' 30''$) nullo modo admitti poſſe: qua in re tam ab Oriano, quam a Burckhardo et quoad ſignum, et quoad quantitatem multum recedit. Quapropter huic æquationi eam ſubſtituendam exiſtimavi, quam Orianus actioni Veneris in Martem tribuit $+ 7''63$ ſin (♀ $-$ 3 ♂ $- 64^\circ 9'$). Quod in tabulis noſtris perturbationes Schuberti præ reliquis delegimus; id ideo factum eſt, quod perturbationes Oriani, tabulæque ex iis conditæ in Ephemeridibus Mediolanenſibus jam proſtent; perturbationes Burchhardi a le Français in tabulis Martis ſint adoptatæ. Perturbationes autem Schuberti, quas in uſum meum vocare placuit, ſunt ſequentes, excepta quinta, quam, ut dixi, ab Oriano mutuati ſumus:

Pro

Pro longitudine.

I. — 6″99 ſin (☉ — ♂) — 0″97 ſin 2 (☉ — ♂
II. + 13,83 ſin (44°47′40″ + 2 ♂ — ☉)
III. + 7,05 ſin (2 ☉ — 3 ♂ — 33°4′10″)
IV. — 5,45 ſin (66°3′30″ + 4 ♂ — 2 ☉)
V. + 7,63 ſin (♀ — 3 ♂ — 64°9′)
VI. — 24,41 ſin (♂ — ♃) + 13,59 ſin 2 (♂ — ♃
+ 1,18 ſin 3 (♂ —
VII. + 21,61 ſin (♂ — 2 ♃ — 31°59′30″)
VIII. + 3,68 ſin (♃ + 96°4′50″)
IX. — 3,03 ſin (2 ♂ — ♃ + 25°12′10″)

Pro Radio Vectore.

— 21,5 Coſ (2 ☉ — 3 ♂ — 32°56′10) = Arg. II
+ 78,3 Coſ (♂ — ♃) — 67,9 Coſ 2 (♂ — ♃)
— 6,9 Coſ 3 (♂ — ♃) = Arg.
— 54,7 Coſ (♂ — 2 ♃ — 32°17′20) = Arg. VII

His addidimus tabulam ultimam, ab Anomalia me Martis pendentem, quæ factores continet, quibus *ſum* perturbationum pro logarithmo radii vectoris ſemper mu plicanda eſt, ut ea diverſis a foco ellipſeos diſtantiis ad tetur.

Sequitur jam tabella oppoſitionum Martis, in qua d plicem diſſenſum tabularum ab obſervationibus exhibemu Prior, litera O in fronte notata, perturbationes *Oriani* d ſignat, quæ in illa comparatione tabularum erant adopt tæ; poſterior litera *S* inſignita perturbationes *Schuberti* r ſpicit.

Lon-

Longitudines Martis heliocentricæ in ſuis oppoſitionibus cum ſole diverſis in locis obſervatæ.

Annus et Dies.	Temp. med. Pariſ.	Long. ♂ helioc.	Diſſenſ. tabul.	
			O	S
1595. 9Nov.	22h 18′ 57″	1s 17° 33′ 31″1	+ 6″8	+ 0″3
1691. 11Dec.	3 26 45	2 19 54 30 0	+ 7 4	+ 2 0
1694. 17Jan.	4 50 23	3 28 11 36 4	+ 6 2	+ 3 7
1696. 20Febr.	9 13 27	5 2 18 1 8	+ 7 1	+ 3 7
1741. 12Jan.	8 7 55	3 22 49 32 9	— 9 4	— 9 8
1743. 15Febr.	19 10 34	4 27 16 35 0	— 3 9	— 5 5
1745. 21Mart.	14 39 16	6 1 35 10 0	— 4 4	— 6 3
1747. 1Maj.	6 54 3	7 10 55 51 7	0 0	+ 0 6
1749. 26Jun.	1 47 30	9 4 54 57 0	— 9 9	—15 7
1751. 14Sept. *	8 23 22	11 21 35 1 0	— 0 1	+ 3 8
1753. 16Nov. *	10 16 5	1 24 47 28 2	— 3 1	— 5 3
1755. 30Dec. *	0 6 42	3 8 34 55 2	— 1 3	— 5 1
1760. 7Mart.	17 37 59	5 18 9 23 5	+10 7	+ 7 2
1762. 14Apr.	7 32 40	6 24 46 50 6	— 8 4	— 8 2
1764. 1Jun.	0 46 0	8 11 21 59 1	— 4 1	— 1 5
1766. 13Aug. *	1 47 58	10 20 41 23 1	— 2 9	— 1 2
1768. 25Oct. *	19 36 31	1 3 25 40 3	— 1 6	— 2 2
1770 14Dec. *	11 22 19	2 23 7 6 8	— 8 3	— 7 2
1773. 20Jan. *	6 3 11	4 1 6 56 7	—13 3	—11 6
1775. 23Febr. *	8 54 48	5 5 7 57 8	— 2 2	— 0 6
1777. 29Mart. *	21 21 59	6 10 0 15 9	— 4 9	— 7 3
1779. 11Maj. *	22 5 51	7 21 27 9 8	— 8 1	— 0 6
1781. 12Jul. *	6 51 12	9 20 37 5 7	—11 1	— 3 1
1783. 1Oct. *	0 2 56	0 8 10 4 4	+ 4 3	— 0 3
1785. 27Nov. *	6 3 14	2 5 58 57 1	— 0 2	— 6 5
1788. 7Jan. *	7 58 12	3 17 18 6 5	— 0 5	— 4 6
1790. 10Febr. *	5 13 33	4 22 14 44 4	— 2 1	— 3 7
1792. 15Mart. *	14 52 56	5 26 14 51 8	+ 8 7	+ 7 8
1794. 23April.	18 6 5	7 4 13 37 9	+ 0 5	+ 2 9

Annus et Dies.	Temp. med. Parif.	Long. ♂ helioc.	Diffenf. tab. O	Diffenf. tab. S.
1796. 14 Jun.	14h 16′ 3″	8s 24° 34′ 57″4	+ 1 0	+ 2″9
1798. 31 Aug.	11 45 57	11 8 43 0 2	+ 8 7	+ 10 6
1800. 8 Nov.	12 56 55	1 16 25 43 9	+ 3 2	0 0

Columna penultima, quæ diffenfum tabularum cum perturbationibus Oriani exhibet, fummam errorum pofitivorum manifeftat + 64″6; et fummam negativorum — 99″8: unde conficitur, epocham longitudinis 1″1 effe augendam. In ultima columna, ubi perturbationes Schuberti occurrunt, fumma errorum pofitivorum eft + 42″7; negativorum — 106″3, qui augmentum epochæ longitudinis + 2″0; aut fi oppofitiones annorum 1749 et 1773, quæ a ceteris nimium diffident, rejiciantur, + 1″2 poftulare videntur. Ex ultima præterea columna, ubi Schuberti perturbationes in comparationem admiffæ funt, inftituta inveftigatione conficitur æquationem Centri in tabulis hisce propofitam 2″3; et longitudinem Aphelii 8″ effe augendam: quæ quantitates interea pro contemnendis haberi poffunt.

Verum ad fidem tabularum præfentium explorandam aliæ obfervationes erant perquirendæ, unde elementa tabularum inveftigata nullo modo dependebant. Hunc in ufum obfervationes Martis, ab anno 1766 ad 1793 Grenovici inftitutas calculis fubjeci, ut iisdem tabulæ noftræ conferri poffent, duplicis generis perturbationibus, et Oriani et Schuberti in fubfidium vocatis. Obfervationes ipfæ ita fe habent; diffenfum tabularum fummatim poft eas fubjungam.

Lon-

Longitudines et Latitudines Martis geocentricæ Grenovici observatæ.

Annus et Dies.	*Temp. med. Parif.*	*Long. ♂ geoc. vera.*	*Lat. ♂ geoc. vera.*
1766. 8Jan.	$20^h\ 12'\ 18''$	$7^s\ 21°\ 49'\ 44''7$	$0°\ 42'\ 26''5$ B
1766. 10Aug.	12 35 56	10 21 21 41 2	6 52 6 8 A
1766. 11Aug.	12 30 58	10 21 5 58 1	6 52 16 0 A
1766. 12Aug.	12 25 58	10 20 50 7 3	6 52 9 6 A
1766. 13Aug.	12 20 58	10 20 34 19 3	6 51 56 6 A
1766. 23Dec.	5 58 56	11 29 30 40 8	0 15 21 5 A
1768. 30Jun.	18 5 38	0 8 26 46 4	2 47 39 3 A
1768. 2Jul.	18 2 26	0 9 42 34 8	2 49 28 6 A
1768. 11Oct.	13 10 57	1 8 7 36 6	2 16 5 2 A
1768. 16Oct.	12 45 0	1 6 35 7 5	2 0 27 1 A
1768. 17Oct.	12 40 44	1 6 15 27 7	1 57 11 1 A
1768. 19Oct.	12 29 9	1 5 35 18 2	1 50 22 3 A
1768. 25Oct.	11 57 12	1 3 32 4 5	1 28 57 2 A
1768. 27Oct.	11 46 35	1 2 51 27 8	1 21 37 4 A
1768. 29Oct.	11 36 0	1 2 11 38 8	1 14 12 9 A
1768. 30Oct.	11 30 46	1 2 52 5 2	1 10 34 1 A
1768. 31Oct.	11 25 31	1 1 32 55 8	1 6 57 0 A
1768. 1Nov.	11 20 18	1 1 14 16 2	1 3 18 1 A
1768. 6Nov.	10 54 42	0 29 47 25 6	0 45 5 5 A
1768. 7Nov.	10 49 41	0 29 31 42 2	0 41 29 5 A
1768. 8Nov.	10 44 43	0 29 16 38 8	0 37 56 9 A
1769. 7Febr.	6 5 59	1 29 7 36 5	1 34 39 0 B
1770. 6Sept.	11 56 19	2 14 18 22 2	0 47 51 9 A
1770. 13Dec.	12 9 41	2 23 29 55 7	2 51 20 3 B
1771. 23Mart.	6 13 59	3 1 57 6 5	2 16 0 8 B
1772. 20Oct.	18 8 40	3 27 42 7 7	1 13 12 6 B
1773. 24Jan.	12 1 27	3 29 25 25 9	4 26 31 8 B
1773. 25April	6 27 18	4 5 37 1 1	2 6 7 3 B
1775. 25Febr.	12 17 54	5 4 17 0 5	4 20 10 1 B

Annus et Dies.	Temp. med. Pariſ.	Long. ♂ geoc. vera.	Lat. ♂ geoc. vera.
1775. 30Maj.	6h 21′ 27″	5s 9° 2′ 32″1	1° 11′ 10″3 B
1776. 24Dec.	18 10 49	6 4 7 1 6	2 15 36 5 B
1776. 25Dec.	18 8 28	6 4 32 53 1	2 16 21 4 B
1777. 30Mart.	12 15 4	6 9 45 46 7	2 55 17 0 B
1777. 11Jul.	5 56 5	6 18 16 5 8	0 32 0 4 A
1779. 28Jan.	18 5 17	7 9 10 17 3	1 39 21 6 B
1779. 9Maj.	12 18 17	7 22 18 6 4	0 13 18 6 A
1781. 18Nov.	6 15 14	10 26 50 9 9	1 32 42 4 A
1783. 20Maj.	18 27 24	11 0 24 29 2	2 11 53 6 A
1783. 21Maj.	18 26 1	11 1 3 34 0	2 13 39 4 A
1783. 30Sept.	12 8 2	0 8 19 11 1	4 7 54 0 A
1783. 1Oct.	12 2 54	0 8 0 55 7	4 4 18 2 A
1784. 22Jan.	6 1 29	1 2 17 18 7	0 59 23 2 B
1784. 23Jan.	5 59 39	1 2 50 20 4	1 0 7 2 B
1785. 28Nov.	11 49 27	2 5 30 47 0	1 41 16 5 B
1786. 5Mart.	6 13 29	2 16 6 23 5	2 9 4 5 B
1787. 8Oct.	17 58 53	3 13 52 18 0	0 38 39 0 B
1788. 14Jan.	11 38 3	3 14 30 52 5	4 7 50 2 B
1788. 11April	6 26 6	3 22 35 5 1	2 16 28 8 B
1788. 19April	6 9 33	3 26 6 8 4	2 7 14 3 B
1789. 8Nov.	18 19 2	4 18 13 0 7	1 50 13 1 B
1789. 9Nov.	18 26 51	4 18 39 17 3	1 51 38 4 B
1790. 11Febr.	12 23 4	4 21 43 39 1	4 32 10 3 B
1790. 12Febr.	12 17 31	4 21 19 49 6	4 31 44 9 B
1790. 12Maj.	6 35 30	4 24 19 58 3	1 43 50 7 B
1790. 13Maj.	6 33 7	4 24 44 21 6	1 42 17 5 B
1790. 14Maj.	6 30 45	4 25 8 59 6	1 40 46 9 B
1790. 15Maj.	6 28 23	4 25 33 57 5	1 39 16 4 B
1790. 16Maj.	6 26 3	4 25 59 7 1	1 37 45 7 B
1790. 17Maj.	6 23 44	4 26 24 35 2	1 36 19 6 B
1791. 15Dec.	18 7 11	5 22 44 44 3	2 20 44 2 B

Annus et Dies.	*Temp. med. Parif.*	*Long. ♂ geoc. vera.*	*Lat. ♂ geoc. vera.*
1792. 11 Mart.	12ʰ 45′ 58″	5ˢ 27° 49′ 42″8	3° 43′ 29″1 B
1792. 15 Mart.	12 24 28	5 26 17 17 5	3 39 42 0 B
1792. 18 Mart.	12 8 17	5 25 7 5 5	3 35 54 4 B

Comparatione tabularum noftrarum affumptis perturbationibus Oriani cum his obfervationibus inftituta manifeftatur fumma error. in long. heliocentrica pofitivorum 69″9; negativorum 207″1: unde conficitur, æquationem Centri tabularem 3″6 effe minuendam; longitudinem contra Aphelii 4″4 augendam, correctionemque epochæ longitudinis + 2′ 2 effe ftatuendam.

Ubi vero perturbationes Schuberti in fubfidium funt vocatæ, fumma errorum in longitudine heliocentrica pofitivorum erat 80″4; negativorum 147″4: qui correctionem æquationis Centri maximæ — 2″44; correctionem pro longitudine Aphelii + 8″7 et demum pro epocha longitudinis mediæ + 1″0 poftulare videbantur. Cum correctiones æquationi Centri applicandæ, ex oppofitionibus, et his obfervationibus Grenovicenfibus mutuo fe fere deftruant, æquatio Centri in tabulis hifce propofita, noftro judicio intacta relinquenda eft. Correctio Aphelii 8″ adeo eft exigua, ut tuto negligi poffit.

Cum inclinatio orbitæ, quam in tabulis noftris 1°51′5″ exhibemus, potiffimum ex obfervationibus Grenovicenfibus definita fit, fingulas hic ex unaquaque obfervatione fub oculos ponere juvat.

In-

			Inclinatio orbitæ ♂
Ex obſ.	1766.	10 Aug.	1° 51′ 4″8
—	1766.	11 Aug.	4 5
—	1766.	12 Aug.	2 1
—	1766.	13 —	4 9
—	1768.	30 Jun.	4 8
—	1768.	2 Jul.	4 8
—	1771.	23 Mart.	4 8
—	1773.	24 Jan.	3 0
—	1775.	25 Febr.	6 3
—	1776.	24 Dec.	6 3
—	1776.	25 Dec.	2 8
—	1786.	5 Mart.	6 6
—	1788.	11 April	5 6
—	1788.	19 April	5 6
—	1790.	11 Febr.	5 6
—	1790.	12. Febr.	3 4
—	1791.	15, Dec.	6 0

Inclinatio ex omnibus media = 1° 51′ 4″8

Demum antequam finem faciam, illud ante omnia monendum exiſtimo, nequis offendatur, ubi fortaſſis tabulas noſtras præſertim circa tempora oppoſitionum 15″ et amplius in longitudine geocentrica a cœlo aberrare deprehenderit; cum error geocentricus eo tempore triplo fere major exiſtat, quam heliocentricus; adeoque illa 15″ ad 5″ deprimantur, ſi error tabularum heliocentricus ſpectetur. Neque ii ſumus, qui tabulis noſtris certitudinem intra limites 5″ polliceri audeamus; præſertim ſi in memoriam revocemus, ipſas perturbationes pro diverſis auctoribus 6 vel 7 ſecundis inter ſe differre poſſe, quod mihi ſæpenumero eventus comprobavit; cum duplicis generis perturbationes cum obſervationibus contenderem. Accedit, quod æquationes perturbationum 3″ minores prætermittendæ erant, ne numerus tabularum, et moleſtia calculorum ultra modum excreſceret. Illud præterea perpendendum, ad excitandum locum planetæ geocentricum, neceſſario requiri locum ſolis eo tempore, qui ple-

plerumque e tabulis petendus eſt, quæ a cœlo aliquantum aberrare poſſunt. Variatio autem in loco ſolis circa tempus oppoſitionis duplam variationem in loco geocentrico Martis inducit. Quodſi jam ponamus errorem heliocentricum 5″, qui ſive e defectu quodam elementorum orbitæ, ſive e perturbationum calculo ortum habeat, quique absque injuria facile admitti poteſt; ſi præterea fingamus, quod nullo modo exaggeratum eſt, locum ſolis e tabulis petitum pari modo errore 5″ eſſe affectum: uterque is error, ſi in partem eandem conſpiret, longitudinem planetæ geocentricam 20″ et amplius incertam reddere poteſt; priore in 15″, altero in 10″ abeunte.

ELE-

ELEVATIO POLI VINDOBONENSIS

E

LIESGANIGII OBSERVATIONIBUS

VINDICATA

A

FRANCISCO DE PAULA TRIESNECKER.

Occurrit in commercio literario Gothæ edito (1801. Nov. pag. 553) mentio de obſervationibus Liesganigii in collegio S. J. Vindobonæ habitis, ejusque apparatu aſtronomico, nominatim de ſectore, quo is latitudinem ſpeculæ ſuæ et amplitudinem gradus meridiani per Auſtriam et Hungariam dimènſi olim determinaverat. Tametſi Liesganigius omnem impendit operam, ut organum, quod ſubtilibus adeo diſquiſitionibus deſtinabatur, omni ex parte abſolutum, quantum in humanis fieri poterat, obtineret: adferuntur tamen quædam loco ſupra citato, quæ ſtructuram ejus ſectoris minus commendare videantur, atque adeo obſervationes ejusdem ope peractas dubias reddant, aut certe ſuſpectas.

„Operæ pretium (his utitur verbis adverſarius) cum tempore videri poſſit, limbum ſectoris Liesganigiani denuo in examen vocare. Notum eſt, fuiſſe quosdam, qui in Caillii ſectore errorem 10″ aut 12″ ſuſpicati ſint. Puncta ſuſpenſionis perpendiculi utroque in ſectore erant acus: quæ methodus poſteriore tempore, ut minus recta deprehenſa

hensa est, ubi error, existimante ita Lalandio, 10″ vel 12″ evitari vix possit. Dicitur præterea limbus divisionis, aut potius Tangentium scala ex aurichalco admodum tenui fuisse fabrefacta, atque ea de caussa, dum convertitur, periculo flexionis facile obnoxia."

Atque hæc dubia, quæ adversus Liesganigii sectorem proferuntur, ad tria potissimum, uti ego quidem existimo, revocari possunt: 1mo ad divisionem limbi, aut potius scalæ tangentium fortassis minus accuratam: quæ firmatur exemplo sectoris Cailliani, cui pariter simile olim vitium objiciebatur; 2do ad methodum, qua suspensio perpendiculi erat applicata: qua fieri poterat, ut filum ponduscullum deferens, frictioni obnoxium, oscillationem minus liberam haberet, et impeditam. 3tio demum ad flexionem limbi divisi, aut scalæ tangentium, quæ cum e lamina valde tenui erat elaborata, cum sector converteretur, facile inflecti poterat.

Jam ut singula ordine expendamus;

1mo. Quod ad divisionem scalæ Tangentium attinet, Liesganigius quidem omnibus in coeptis suis ultra modum anxius, hac in re nihil quidquam sive industriæ, sive solicitudinis a se desiderari passus est, uti in opere ejus supra citato a pag. 170 et sequ. videre est. Cum autem Liesganigius latitudinem speculæ suæ ope observationum, quas dicimus correspondentes, quasque Caillius eodem tempore Parisiis in Collegio Mazarinæo instituerat, per differentias parallelorum observatas determinasset, adversarius ex eo, quod Cailliano sectori olim vitium divisionis objiciebatur, occasionem arripuit, sectorem quoque Liesganigii criminandi. Verum Liesganigius ipse huic jam objectioni occurrerat, quam sequentibus diluere verbis aut certe infringere conatur: „Novi equidem (ait pag. 205. Dimens. Grad.) Cailliani sextantis arcum erroris argui, qui ad 10 vel 12 secunda adsurgat (connaissance des mouv. cel. par. M. de la Lande 1765 pag. 196.) Id suspicatum esse fe-

runt

runt Bradlejum, quantum Aſtronomum! at quæſo, certumne, hunc ita ſenſiſſe? Caillius familiari mecum literarum commercio utebatur inde ab anno 1758: memet ſtimulabat identidem, & impellebat, ut ſevero inſtrumenta mea, eorumque diviſiones examini ſubmitterem; maximam ex hujus neglectu aſtronomicis progreſſibus moram injectam eſſe, injicique a multis etiam hodie: de ſeipſo non uno operum ſuorum loco palam teſtatur, datisque ad me literis ſemel, iterumque profeſſus eſt, ſe ſingula diviſionum puncta in inſtrumentis ſuis excuſſiſſe ſumma cura ac patientia; putemne in totius arcus examine aut minus ſedulum fuiſſe, aut minus vidiſſe, neque obſervaſſe 10 vel 12 ſecundorum errorem, qui ſenſum haud facile fugiat? ſed nempe halucinari potuit! Aſt eundem errorem errarit? Eundem, inquam, in ſectore, quem in ſextante ſuo? Id vero me commovet: triginta aliquot fixarum obſervationes utroque inſtrumento ab eo factas inter ſe comparavi, vidique ſextantem reſpectu ſectoris in partes oppoſitas peccare, atque ita, ut defectus ab exceſſibus quam proxime æquentur. In craſſiusculos aliquot errores offendi, ſed qui in utramque rurſus partem abeunt. Quid? ſi omnis Bradlejum inter atque Caillium diſſenſio ab intricata adeo, variave refractione ortum ducat? Intereſſet ſane aſtronomiæ plurimum, ut de hoc, ſiquis eſt, inſtrumenti Cailliani errore ſine partium ſtudio decernatur, ne tot (quibus indefeſſus, tantique, cum viveret, nominis Aſtronomus vitam etiam immolavit) laborum fructus in dubio hæreat. Ceterum ſi is etiam in Cailliano ſectore, vel ſextante, vel utroque error ſit, *nil inde vitii in meam latitudinis Viennenſis determinationem promanat, ob exiguas fixarum, ex quibus deducta eſt, a vertice diſtantias.*" Ita Liesganigius, cui quid peculiariter addam, non habeo; niſi quod ſententia Liesganigii, cauſſam diſſenſionis inter Bradlejum Caillîumque in variam refractionem conjicientis, magnam e Bürgii diſquiſitione veriſimilitudinem adipiſcatur, qui vel ex ipſis obſervationibus Grenovicenſium majores Bradlejanis invenerat refractiones, Caillianisque propiores.

2do.

2do. Neque methodus, qua ſuſpenſio perpendiculi facta eſt, accurationi obſervationum obeſſe poſſe videtur. Cum enim differentiæ parallelorum Viennenſis atque Pariſini ex obſervationibus Liesganigii et Caillii adeo conſentientes ſint, ut maxima et minima earum intra limites 3 ſecundorum conſiſtant; probabile nullo modo eſſe videtur, perpendiculum in alterutram a vertice partem aberraſſe; niſi admittere velimus, id quod minus veriſimile videtur, perpendiculum tam Viennæ, quam Pariſiis (cum et Caillius eadem ſuſpenſionis methodo utebatur) ſemper æqualiter eandem in partem, ſeu ſector in ortum, ſeu in occidentem converteretur, ob attritum aberraſſe. Verum id ipſum ſi demus, quamvis ad id nulla ratione induci poſſumus; nihil plane vitii in elevationem poli Vindobonenſem redundabit, ſi modo latitudini collegii Mazarinæi ſua ſtet veritas.

3^{tio}. Quod demum de periculo flexionis, cui regula tangentium obnoxia eſſe poſſit, in medium profertur, id mea quidem ſententia ſine ullo probabili fundamento adſtruitur. Quamvis in deſcriptione ſectoris Liesganigiani de craſſitudine hujus laminæ nulla aperte mentio occurrat, periculum tamen flexionis procul abeſſe videtur, cum ea regula cum alia ferrea adeo firmiter connexa fuit, ut plana utriusque (pag. 167) examuſſim congruerent. Præterea ſi flexio ejus aliqua locum habuiſſet, eam ſeries obſervationum, quæ in dimenſione illa graduum exhibentur, manifeſtare debuiſſet. Verum a menſe Martio 1758 (ſector anno 1757 conſtrui cœptus eſt) uſque ad Junium 1760 differentiæ parallelorum obſervatæ, ut ſupra dixi, adeo conſentientes ſunt, ut metum omnem flexionis in ea regula excludant.

Ceterum cum ſola ſuſpicio, qua diviſionem ſectoris Cailliani quibusdam onerare placuit, opportunitatem ſubminiſtraſſe videatur, eandem ſectori quoque Liesganigiano impingendi; aliam nobis viam ineundam duximus latitudinis Vindobonenſis ex iisdem obſervationibus ſtabiliendæ; ut

ut constaret, quantum certitudinis determinationi Liesganigianæ sit tribuendum: præsertim, cum distantiæ fixarum Parisiis observatæ, atque ad 1 Jan. 1750 reductæ, a Liesganigio modo aliquantum diverso proferuntur, quam quo in fundamentis Astronomiæ exhibentur. Quoniam elevatio poli collegii Viennensis 48°12′34″$\frac{1}{2}$ per differentias parallelorum et Viennæ et Parisiis observatas ope latitudinis collegii Mazarinæi definita est: statui, prætermissis Caillii observationibus, eandem e solis Liesganigii distantiis a Vertice eruere, vocatis in subsidium fixarum declinationibus. Et quamvis declinationes fixarum quoad paucula secunda incertæ esse possint; eæ tamen diversis e catalogis depromptæ medium aliquod arithmeticum subministrare posse videbantur, quod a vera positione multum abesse non posset. Numerus tam distantiarum a vertice observatarum. quam fixarum erat tantus, ut, si elevationes Poli singulæ e singulis fixis deductæ aliquantum inter se differrent, ex omnibus tamen media ad veram quam proxime accedere existimari tuto posset. Tametsi autem in rigore dici non possit, observationes Caillii, cum et illius declinationes in usum adhiberem, penitus exclusas fuisse; eæ tamen nonnisi partem aliquam auctoritatis sibi hac in re vindicabunt, positionibus complurium aliorum auctorum in usum simul adoptatis. Eventus autem docuit, latitudinem collegii Vindobonensis inde deductam unico tantum secundo Liesganigianam superare, quæ, uti diximus, unicis Caillii observationibus innitebatur. Ex quo mihi argumentum adversus Cailliani sectoris detractores peti posse videtur, statuendumque, instrumentum hujus viri tot calumniis impetitum, perperam erroris argui, saltem in iis limbi portionibus, in quibus distantiæ fixarum a vertice cum Liesganigio correspondentes sunt observatæ.

Observationibus iisdem usus sum, quas Liesganigius in opere suo pag. 200 ad determinandam latitudinem speculæ suæ proponit; neque aliæ, quæ in usum servire possent, ad manum erant. Cum vero vir ille celeberrimus distantias suas a vertice observatas, per refractionem, aberra-

rrationem, nutationemque correctas, ope præcessionis ad . Jan. 1750 reductas exhibeat, ad quam epocham Caillius observationes suas reduxerat; ego ipsas quoque distantias a vertice, declinationesque apparentes in hanc rem adhibendas putavi, quo sese nostri reductionum calculi mutuo consensu comprobarent. Quare duplicis generis elevationem poli in sequente tabella exhibeo. Columna tertia talem proponit, qualem distantiæ veræ ad initium 1750 reductæ, declinationesque mediæ ad eundem annum dedere; quarta demum eas latitudines ob oculos ponit, quas distantiæ apparentes, declinationesque ad annum observationum reductæ manifestarunt. Cetera cum per se clara sint, expositione non egent.

Nomen stellæ observatæ.	*Epocha observationis.*	*Elevat. Poli Vindob. Coll. S.J.*	
		ex observ. ad 1750 reductis	*ex observat. apparent.*
Capella	1758. Mart. April.	48°12′37″ 6	48°12′34″ 1
ι Urs. maj.	1758. April.	— — 36 3	— — 37 2
κ Urs. maj.	1758. April.	— — 36 7	— — 38 1
η Urs. maj.	1758. Maj. Jun.	— — 34 2	— — 34 4
Capella	1758. Aug. Sept.	— — 36 0	— — 32 0
γ Dracon	1758. Aug. Sept.	— — 36 0	— — 38 7
ι Urs. maj.	1759. April.	— — 36 9	— — 36 9
η Urs. maj.	1759. Maj.	— — 33 0	— — 33 0
κ Urs. maj.	1760. Mart. Apr.	— — 33 8	— — 34 5
η Urs. maj.	1760. Jun.	— — 35 1	— — 35 2
Med. e 10 determ.		48°12′35″56	48°12′35″51

Liesganigius ex observationibus suis cum Caillianis comparatis per differentias parallelorum habet 48°12′34″½, unico secundo minorem. Cum vero specula Universitatis ″5 sit boreelior Collegio, in quo Liesganigius observa-

ve-

verat; obtinebimus latitudinem ſpeculæ noſtræ e ſuperi-
ribus determinationibus 48°12′37″0, unico ſecundo maj-
rem, quam quæ ad hoc tempus a nobis uſurpata eſt. A-
que de tantilla quidem quantitate nemo, credo, quiſquam
litem movebit; cum vix ulla ſit ſpecula (unica fortaſſis ex-
cepta) quæ latitudinem ſuam intra hunc limitem cognitam
habeat.

ELE-

ELEVATIO POLI VINDOBONENSIS

OPE SEXTANTIS 10 POLLICUM

EXPLORATA

A

FRANCISCO DE PAULA TRIESNECKER.

Dum post Liesganigii observationes, e quibus latitudo Vindobonensis stabilita est, nostras, quas per decursum anni proxime elapsi, eadem de caussa sextante Hadleyano instituimus, illico subjungimus; non eam in partem id accipi velim, ut quis existimet, id nobis propositum esse, ut Liesganigii conamina circa elevationem poli Viennensem aut emendare, si ab eo dissentire, aut roborare qualicunque tentamine nostro velimus, si cum eo quam proxime consentire videamur. Id autem quam longissime a me absit. Novimus enim, quid inter Gigantem, Pigmæumque, quid inter radium 10 pedum, radiolumque 10 pollicum intersit; neque unquam nobis in mentem venit, eousque eluctari nos posse, ut melius aliquid in medium adferamus, quam quod a Liesganigio stabilitum habemus.

Cum

Cum etiam mihi ſextans Hadlejanus Trougthonii man elaboratus, numerumque 490 in fronte gerens, curante I B. de Zach Aſtronomo Gothano ex ære meo obtigiſſet pronum erat, ejusdem vires explorare, videreque, eju quid valeant humeri, quid ferre recuſent. Eam in rei opus erat norma, ad quam obſervationes noſtræ exigi poſ ſent, judiciumque ferri indubitatum, in iis ſiquid factum recte, ſiquid perperam. Atque hæc erat cauſſa, cur lati tudo urbis noſtræ a Liesganigio ſtatuta ex ipſius obſerva tionibus rurſus ad examen vocanda eſſet, atque ab erroris ſuſpicione liberanda.

Maximam difficultatem, cum ope ſextantis capiuntur altitudines ſolis circa meridiem, movet horizon artificialis, ejusque ſitus, ſitusque, quem ſemel obtinuit, conſervatio. Pes enim, cui vitrum planum imponitur, cum cochleis ligneis inſiſtat, non diu paralleliſmum horizontis tueri poſſe videtur, radiis ſolis expoſitus. Id quidem mihi plerumque deprehendere viſus ſum, ut ſitus ejus, a libella exacte definitus, tempore æſtatis intra 7 vel 8 minuta pro immutato haberi nullo modo poſſit. Quapropter quamprimum obſervationes erant cœptæ, ſitus horizontis identidem per intervalla erat examinandus, priſtinumque in locum reſtituendus, ſicubi aberraſſe deprehenſum eſt. Hac quidem adhibita cautela et votis meis et latitudini, quæ inveſtigabatur, commode ſatisfactum eſt.

Ad reducendas altitudines obſervatas ad altitudinem meridianam formula uſus ſum ſequente in Cagnolii Trigonometria propoſita. Si ponatur ZPS = angulo horario; PS = complemento Declinationis; PZ = complemento elevationis poli; ZS = complemento altitudinis obſervatæ; TZ = complemento altitudinis meridianæ; habetur:

$$\sin\tfrac{1}{2}(ZS-ZT) = \sin^2\tfrac{1}{2}ZPS \times \frac{\sin PZ.\ \sin PS.}{\sin\tfrac{1}{2}(ZS+ZT)},$$

atque duplus angulus inventus eſt ipſa variatio altitudinis intra tempus obſervationis et meridiem. Ratio præterea ſemper habita fuit

fuit variationis quoad declinationem, quæ intra illud temporis ſpatium locum habuerat.

In ſequente tabella, quæ conatus noſtros ob oculos ponit, non ipſas obſervationes, cum id prolixius fuiſſet, ſed latitudines ex ipſis deductas exhibemus. Quodſi eodem die duplex latitudo occurrat, iisdem quidem utrobique obſervationibus uſi ſumus; ſed in poſteriore, ubi numerus obſervationum eſt contractior, aliquas e numero comparationum excluſimus, quæ ab arithmetico medio nimium recedebant.

Annus & Dies.	*Num. obſ.*	*Latit. Vind. ſpecul. Univ.*	*Notanda.*
1802. 7 Aug.	13	48° 12′ 33″ 6	imago ſolis directa, minus præciſa
8 —	14	— — 34 6	
9 —	6	— — 38 9	vap. limb. non terminat.
10 —	16	— — 41 0	rare nubeculæ
	12	— — 40 0	
20 —	17	— — 47 9	ventus validus
21 —	15	— — 42 4	
22 —	11	— — 38 8	
23 —	23	— — 33 7	ventus vehemens
25 —	18	— — 41 8	
26 —	15	— — 36 0	
31 —	23	— — 34 1	
1 Sept.	23	— — 34 7	per intervalla nubes
3 —	19	— — 34 4	nubes
4 —	17	— — 40 6	altera ſolis imago nimium lucida.

Annus

Annus & Dies.	*Num. obs.*	*Latit. Vind. specul. Univ.*	*Notanda.*
1802. 5 Sept.	17	48° 12′ 37″ 7	
	16	— — 38 7	
14 —	20	— — 47 3	sol halone circumdatus
22 —	17	— — 44 7	
25 —	6	— — 39 8	
3 Oct.	22	— — 33 9	
4 —	19	— — 50 0	situs horiz. mutat.
5 —	12	— — 35 1	
1803. 11 Apr.	21	— — 38 4	
	16	— — 36 7	
12 —	24	— — 35 8	
13 —	14	— — 41 1	sol in dens. vaporib.
14 —	21	— — 35 3	
15 —	18	— — 38 1	
16 —	22	— — 35 4	hodie cochleæ horizontis
	21	— — 35 9	contra radios solis ob-
			tectæ.
17 —	27	— — 34 6	
18 —	27	— — 32 6	
3 Maj.	18	— — 32 4	ventus validissimus
	14	— — 35 2	
6 —	17	— — 32 4	interdum nubes
	13	— — 33 2	
23 —	16	— — 36 1	
30 —	24	— — 33 3	initio nubes
2 Jun.	7	— — 36 7	per intervalla nubes
4 —	20	— — 35 9	interdum nubes
	15	— — 38 8	
7 —	20	— — 45 8	

Annus

Annus & Dies.	Num. obs.	Latit. Vind. specul. Univ.	Notanda.
1803. 9 Jun.	18	48° 12′ 39″ 0	
11 —	13	— — 45 4	)nubes per decursum ob-
	7	— — 41 0	)servationum.
12 —	19	— — 30 9	
15 —	19	— — 38 0	
22 —	20	— — 41 3	)hodie pro ligneis hori-
	8	— — 34 5	)zontis cochleis cunei la-
			)pidei adhibiti.
1 Jul.	18	— — 44 3	)cunei lapidei non satis-
	11	— — 42 1	)facere videntur.
2 —	20	— — 35 5	
19 —	27	— — 37 4	situs horizontis suspectus
20 —	14	— — 41 8	)situs horizontis mutatus
	7	— — 40 1	)
21 —	29	— — 42 3	
	21	— — 39 7	
12 Aug.	12	— — 34 7	
19 —	23	— — 33 6	
30 —	28	— — 33 8	
	22	— — 36 1	
17 Sept.	15	— — 32 3	hodie his observationibus adhibitus est sextans L. B. de Matt.
18 —	20	— — 34 5	
20 —	11	— — 32 3	
Ex omnibus Media —		48° 12′ 37″ 1	

Deter-

Determinationes itaque, numero 65, præbent latitudinem ſpeculæ Univerſitatis Vindobonenſis 48° 12′ 37″ 1. Quodſi binas ex hoc numero, quæ 10″ a media quantitate recedunt, excludere velimus, eadem latitudo foret 48° 12′ 36″ 8, ſemper apprime conſentiens illi, quam paullo ſupra ex obſervationibus Liesganigii ſtabilivimus. Hunc autem inter nos conſenſum vel caſui, quem fors fortuna tulit, vel, ſi tamen dicendum eſt aliquid, multiplici obſervationum numero tribuendum exiſtimo.

OB-

OBSERVATIONES
ASTRONOMICÆ
VIENNÆ, ALIISQUE IN LOCIS HABITÆ.

Observationes satellitum Jovis in Specula Cæs. Regia Universitatis Vindobonensis factæ.

Triesnecker usus est tubo achromat. Dollond. 3½ ped.

Bürg tubo achromat. 7 ped.

Observatorum nomina primis eorundem literis designantur.

Mens.	*Dies.*	1803	*Temp. ver. Vienn.*	*Differens. Tab. D. de Lambre.*	*Circumstantiæ.*
Febr.	6	Imm. I	14h 17′ 23″ B		
			— — 58 T	+ 0′ 9″	
—	20	Imm. I	18 6 42 T	— 0 53	*dub.* fasc. med.
—	22	Imm. I	12 34 35 T	— 0 9	fasc. bene vap.
Mart.	29	Em. II	13 54 21 T	— 0 16	vap. prop. disc. ♃.
April.	4	Em. I	7 52 5 T	— 0 23	seren. lun. vicin.
—	9	Em. I	15 19 47 T	— 1 15	calig. fasc. non bene.
—	11	Em. I	9 48 13 T	— 0 14	fasc. distinct.
			— — 17 B		
—	16	Em. II	8 28 46 T	— 0 41	dub. ob. vap. transf.
			— 29 14 B		
—	17	Em. III	10 6 19 T	— 0 26	fasc. distinct.

Menſ.	*Dies.*	1803		*Temp. ver. Vienn.*		*Diſſenſ. Tab. D. de Lambre.*	*Circumſtantiæ.*
April.	18	Em.	I	11ʰ 44′ 4″	T	— 0′ 2″	faſc. diſt.
—	25	Em.	I	13 40 0	T	— 0 10	nub. obſ. dub.
—	27	Em.	I	8 8 44	T	— 0 3	faſc. med vapor.
Maji	4	Em.	I	10 4 14	T	— 0 19	faſc. diſt. lun. vicin.
—	27	Em.	I	10 17 1	T	— 0 53	per nubes dub.
Dec.	9	Imm.	I	18 58 23		— 0 4	faſc. diſt.
—	25	Imm.	I	17 4 45	T	+ 1 2	faſc. null. limb. diducti; obſ. valde dubia.

Occultationes fixarum per lunam.

1803. die 2 Aprilis Imm. γ ♌ 8ʰ 27′ 15″0 t. v. D. de Fallon
— — 16 5 — B. }momen-
16 5 — Tr. }tanee.
Em. 9 29 57 9 — Tr. *obſ. dub.*

Poſt emerſionem tentatæ ſunt diſtantiæ a limbo lunæ lucido; ſed incaſſum, nam fixa ad limbum lunæ adducta ſemper evaneſcebat.

1803. die 9 Aug. Em. ε ♉ 10 46 47 5 t. v. Tr. }mo-
47 5 — D. Bede }ment.

Immerſionem nubes in horizonte prohibuere.

Eclipſis ſolis die 16. Aug. 1803
Viennæ obſervata.

Initium 18ʰ 54′ 42″6 t. v. Tr.
47 6 — D. Bede Aſtron. Carolineuſ.
Finis 20 55 39 5 t. v. D. Bede.
— — 42 5 — D. Schöps.
— — 45 5 — Tr.

D.

D. Bede præterea Immerſiones et emerſiones macularum notavit ſequentes

19ʰ 43′ 40″ t. v. Contactus maculæ majoris
44 11 — Immerſio ejusdem
20 14 3 — Contactus maculæ, quæ eſt ſupra major.
15 11 — immerſit tota
23 10 — Contactus maculæ primæ in exitu
23 34 — Emerſio

Cœlo per decurſum totius durationis favente peractæ ſunt dimenſiones ope micrometri obj. Doll. ſequentes

Temp. media Viennæ.	*Partes lucidæ.*	*Eædem a refr. et error. coll. correctæ.*	
	Dig. 20 25	*in part. circ.*	
19ʰ 7′ 43″	3 6 22	28′ 36″ 9	a
9 33	5 12	28 0 9	
11 2	4 12	27 35 3	
12 5	3 18	27 15 7	b
13 30	2 19	26 50 8	
14 41	1 22	26 28 4	
16 23	0 19	25 59 5	c
17 43	2 19 23½	25 37 9	
19 7	19 2	25 16 3	
20 15	18 10	24 58 7	d
21 12	17 21	24 44 3	
22 18	17 2½	24 25 8	
23 21	16 14	24 11 4	e
24 13	16 0	23 56 9	
25 30	15 7	23 38 4	
28 33	13 15	22 55 1	f
29 27	13 6	22 45 9	
30 15	12 20	22 34 9	

Temp. media. Viennæ.	*Partes lucidæ.*	*Eædem a refr. et error. coll. correctæ.*
	Dig. 20 25	*in part. circ.*
19ʰ 31′ 35″	2 12 2½	22′ 16″ 5
32 29	11 19	22 7 7
33 16	11 11	21 59 4
34 15	11 0	21 48 1
35 6	10 15	21 37 8
41 0	8 12	20 43 4 *dub.*
43 37	7 19½	20 25 4
46 50	6 24	20 4 3
48 19	occult. macul.	tota immersit
49 36	6 14	19 54 2
51 7	6 6	19 45 9
52 3	6 0	19 39 9
53 26	5 22	19 36 8
55 16	5 24	19 38 8
56 27	6 0	19 39 8
57 43	5 24	19 38 8
58 49	5 23	19 37 8
20 1 55	6 6	19 46 0
3 1	6 9	19 49 1
4 14	6 13	19 53 3
5 17	6 16	19 56 4
6 13	6 21½	20 2 0
7 53	7 3	20 8 7
8 43	7 10½	20 16 4
9 37	7 13	20 19 0
11 45	8 2½	20 33 9
14 8	8 19	20 51 0
15 4	9 1	20 58 2
15 58	9 11	21 8 6
16 59	9 18	21 15 7

Temp.

Temp. media Viennae.	Partes lucidae.	Eadem a refr. et error. coll. correctae.
	Dig. 20 25	in part. circ.
20h 17′ 46″	luna attingit	maculam
19 18	occultavit	totam
20 0	2 10 18	21′ 41″ 5
21 2	11 8	21 56 9
21 55	11 18	22 7 2
22 47	12 2	22 16 5
23 59	12 15	22 29 9
25 23	13 6½	22 46 4
26 12	13 15	22 55 1
27 4	14 0	23 5 9 }
28 7	14 12½	23 18 8 } g
28 58	14 23	23 29 6 }
29 54	15 12	23 44 0 }
31 3	16 2	23 59 5 } h
32 24	16 20	24 18 0 }
33 57	17 17	24 40 7 }
34 52	18 4	24 53 0 } i
36 16	18 21½	25 11 0 }
37 19	19 14½	25 29 5 }
38 19	3 0 4	25 44 6 } k
43 8	3 0	26 57 6 }
45 0	4 4	27 27 4 }
46 13	4 21½	27 45 4 } l
47 15	5 12	28 1 3 }
48 32	6 8	28 23 1 }
49 41	7 3½	28 43 6 } m
51 8	8 2	29 8 3 }

Ternis

Ternis vicinis ſibi obſervationibus in unam contra ctis, placuit e ſingulis tempus conjunctionis eruere, u ſequitur

		☌			☌
ex a	=	$21^h30'$	2″5	+	1,73141
b	=	— —	5 9	+	1,89091
c	=	— —	5 0	+	2,09261
d	=	— —	12 7	+	2,28751
e	=	— —	10 0	+	2,50131
f	=	— —	25 8	+	2.87591
g	=	— —	42 0	—	4,38051
h	=	— —	23 6	—	3,98741
i	=	— —	29 6	—	3,49611
k	=	— —	23 7	—	3,10111
l	=	— —	32 3	—	2,71011
m	=	— —	32 6	—	2,52991

Med. e prim. 6☌ = $21^h30'10''3$ + 2,22991
— ex ult. 6☌ = 21 30 30 6 — 3,36761

o = 20″3 — 5,59751

Unde l, ſeu correctio latitudinis = + 3″62
atque adeo Temp. ☌ correct. = $21^h30'18''4$ t. med.
Idem ex initio et fine = 21 30 19 7 —

Diſparitio annuli Saturni menſe Junio.

De hoc phænomeno diarium obſervationum noſtrarum ſequentia commemorat.

Die 27. Maji. Poſt obſervatam emerſionem *Satell. I.* Jovis tubus ad Saturnum directus, annulum utrinque e limbo procurrentem exhibuit.

Die 29. Maji. Hor. 10 veſp. anſa annuli ♄ utrinque conſpecta, e limbis globi prominens, ſed orientalior magis protenſa, quam occidentalis; umbra annuli in globo projecta, diſtincta apparuit.

Die

Die 30. *Maji.* Annulus Saturni, uti pridie.

Die 1. *Junii.* Hor. 10 vesp. Annulus ♄ utrinque visus, sed pars orientalis in puncta lucida videbatur esse divisa; pars autem occidentalis continuo protensa. Duo pariter Satellites ♄ in oculos incurrebant, lucidior alter, alter admodum debilis, et non nisi per intervalla conspectus.

Die 2. *Junii.* Uti pridie; sed annulus debilior apparebat.

Die 3. *Junii.* Annulus ♄ multum contractus; ansa orientalis in puncta lucida resoluta.

Die 4. *Junii.* Annulus ♄ utrinque excurrens, visus quidem, sed ægre, partim ob tenuem ejus aciem, quam oculo repræsentabat, partim ob aëris vapores.

Die 7. *Junii.* Hor. 10 vesp. ex utraque parte annulus ♄ per modum tenuis cuspidis apparebat; sed orientalis aliquanto longior, occidentali. Resolutio in exigua puncta non observabatur; post paucos dies probabiliter annulus erit inconspicuus.

Die 8. *Junii.* Annulus ♄ adhucdum visus utraque ex parte.

Die 9. *Junii.* Saturnus in vaporibus; annulus tamen conspectus esse videtur.

Die 11. *Junii.* Hor. 9¼ annulus ♄ utrinque distincte adhuc visus, pariterque umbra annuli in disco ♄ conspecta; sed multo contractior, quam anterioribus diebus.

Die 12. *Junii.* Hor. 10 vesp. annulus ægerrime quidem sed tamen adhuc visus; pars tamen orientalis magis conspicua præ occidentali.

Die 14. *Junii.* Annulus ♄ ex utraque parte visus.

Die 15. *Junii.* Annulus ♄ utrinque visus, sed melius ex parte orientali, atque etiam protractior. Umbra annuli in globo distincta, sed admodum contracta. Hoc die judicabam, annulum pro oculis meis post biduum disparitur um: quod reipsa intra 15 et 20, quod intervallum dierum nubilum erat, evenisse existimo. Nam

Die 20. *Junii.* Post nubilas noctes ex annulo ♄ nihil quidquam deprehensum est, licet umbra annuli in globo Saturni distincte cerneretur.

Op-

Oppoſitio Martis 1802.
Viennæ obſervata.

			Culminationes.	*Differ. decl.*
Die 17. Dec.	119	♈	8° 54′ 3″73	+ 7′ 4″5
	159	♈	9 16 6 62	+ 3 8 6
	385	♉	11 41 52 67	+ 4 4 1
		♂	12 39 3 94;	12h 40 41 3 t. med.
Die 19. Dec.	119	♈	8 46 9 17	+ 12 52 2
	385	♉	11 33 58 20	+ 9 53 2
		♂	12 27 42 96;	12h 29 23 0 t. med.
Die 20. Dec.	119	♈	8 42 12 92	+ 15 39 3
	159	♈	9 4 16 06	+ 11 41 3
	385	♉	11 30 1 97	+ 12 40 4
		♂	12 22 1 66;	12h 23 43 0 t. med.
Die 29. Dec.	209	♉	9 36 35 07	+ 7 8 0
	250	♉	9 45 29 05	+ 1 42 3
		♂	11 31 5 71;	11h 32 35 9 t. med.
Die 30. Dec.	171	♈	8 34 58 11	+ 6 46 7
	209	♉	9 32 40 42	+ 8 15 5
	250	♉	9 41 34 27	+ 2 52 3
		♂	11 25 30 35;	11h 26 59 7 t. med.

Poſitiones fixarum, quibuscum Mars comparatus eſt, depromptæ ſunt e Catalogo cel. D. Bode. Sed poſitiones trium ſequentium ad principium anni 1801 ita corrigendas ex obſervationibus noſtris exiſtimo:

			Aſc. rect. med.	*Decl. med.*
1801.	159	♈	45° 6′ 9″	26° 29′ 59″ B
	171	♈	47 34 13	26 53 7
	385	♉	81 38 18	26 29 28

E ſuperioribus culminationibus habetur

	Aſc. rect. app. ♂	*Decl.* ♂ *appar.*
Die 17. Dec.	96° 0′ 49″ 0	26° 33 52 6 B
19.	95 9 5 9	26 39 40 5
20.	94 42 48 1	26 42 27 2
29.	90 46 36 8	26 59 31 0
30.	90 21 22 8	27 0 40 6

Unde

Unde

	Long. ♂ geoc. vera.	Lat. ♂ geoc. vera.
Die 17. Dec.	$3^s 5° 22' 55''7$	$3° 12' 36''7$ B
19. —	3 4 36 25 5	3 16 36 6
20. —	3 4 12 43 6	3 18 35 5
29. —	3 0 41 25 4	3 31 37 8
30. —	3 0 18 53 6	3 32 41 3

Posito errore tabularum, quas in appendice hujus tomi edidimus, medio geoc. in long. — 1''2; in lat. — 8''1; sequitur tempus oppositionis Martis cum sole die 24. Dec. 1802. $13^h 59' 5''3$ t. med. Vienn. vel $13^h 2' 55''3$ t. med. Paris. Long. ♂ helioc. $3^s 2° 35' 49''6$; Lat. geoc. $3° 25' 28''9$ B; Lat. hel. $1° 18' 1''3$ B. Error tab. helioc. in long. — 0''4; in lat. — 3''2.

Observationes Saturni.

Hæ observationes factæ sunt cœlo minus favente, fixis in tubo interdum evanescentibus, et spectro Saturni difformi, limbisque nihil minus quam præcisis. Ipso oppositionis tempore aeris intemperies nullas admisit.

		Culminationes.	Diff. Decl.
1803. die 15. Mart.	56 ♌	$11^h 16' 30''30$	+ 7' 7''3
	σ ♌	11 41 37 28	+ 14 38 2
	Centr. ♄	11 45 31 51;	11^h 44 36 0 t. med.
die 17. Mart.	c ♌	11 13 20 80	— — —
	σ ♌	11 33 44 02	+ 18 18 5
	Centr. ♄	11 37 3 42;	11^h 36 8 7 t. med.

Unde

	Asc. ♄ app.	Decl. ♄ app.
die 15. Mart.	$168° 43' 53''3$	$7° 20' 58''0$ B
17. —	168 35 7 2	7 24 34 3

Ex his

	Long. ♄ geoc. ver.	Lat. geoc. ver.
die 15. Mart.	$5^s 16° 45' 41''7$	$2° 18' 6''8$ B
17. —	5 16 36 17 2	2 18 0 6

Op-

Oppositio Jovis 1803.

Viennæ observata.

	Culminationes	*Diff. Decl.*
1803. die 18. Mart. g ♌	11h 12′ 21″78	− 10′ 8″3
s ♌	11 22 29 12	− 6 46 0
Centr. ♃	12 26 27 44; 12h 25 33 3 t. med.	
die 19. Mart. g ♌	11 8 25 47	− 7 6 7
s ♌	11 18 32 95	− 3 45 2
Centr. ♃	12 22 2 89; 12h 21 9 1 t. med.	
die 20. Mart. g ♌	11 4 28 21	− 3 49 1
s ♌	11 14 35 67	− 0 29 4
Centr. ♃	12 17 37 24; 12h 16 44 2 t. med.	
die 23. Mart. g ♌	10 52 36 72	+ 5 21 8
s ♌	11 2 44 18	+ 8 46 9
Centr. ♃	12 4 20 81; 12h 3 31 7 t. med.	

Positiones fixarum apparentes

	Asc. rect.	*Decl.*
1803. die 20. Mart. g ♌	163° 23′ 23″6	1° 3′ 17″9 B
s ♌	165 55 40 9	0 59 48 5

Inde

	Asc. ♃ app.	*Decl. ♃ app.*
die 18. Mart.	181° 57′ 51″8	0° 53′ 7″4 B
19. —	181 50 46 3	0 56 8 5
20. —	181 43 39 5	0 59 25 3
23. —	181 22 22 0	1 8 38 9

Ex his

	Long. ♃ geoc. ver.	*Lat. ♃ geoc. ver.*
die 18. Mart.	6s 1° 26′ 38″6	1° 35′ 39″7 B
19. —	6 1 18 55 1	1 35 34 5
20. —	6 1 11 6 0	1 35 46 9
23. —	6 0 47 53 4	1 35 46 1

Sumpto errore tabularum geocentrico medio in long. — 1″6; in lat. — 4″2 conficitur, oppositionem ♃ cum sole contigisse 1803 die 22. Mart. 2h19′26″4 t. med. Viennæ;

næ; vel $1^h 23' 16'' 4$ t. med. Parif. Longitudo ♃ helioc. in ♂ $6^s 0^\circ 58' 50'' 8$; lat. ♃ geoc. $1^\circ 35' 45'' 0$ B; lat. ♃ hel. $1^\circ 18' 13'' 9$; error tab. hel. in long. — $1'' 3$; in lat. — $3'' 5$.

Oppofitio Uraniæ
Viennæ obfervata.

			Culminationes.	Diff Decl.
1803. die 25. Mart.		79 Sext.	10^h 4′ 49″ 98	+ 3′ 54″ 1
		98 ♍	11 59 5 82	+ 17 26 4
		♅	12 27 32 49;	12^h 26 45 7 t. m.
26. Mart.		79 Sext.	10 0 52 84	+ 3 33 4
		98 ♍	11 55 8 68	+ 17 16 3
	dub.	♅	12 23 25 79;	12^h 22 40 2 t. m.
27. Mart.		79 Sext.	9 56 54 17	+ 2 30 2
		98 ♍	11 51 10 95	+ 16 13 9
	dub.	♅	12 19 18 66;	12^h 18 34 2 t. m.
29. Mart.		79 Sext.	9 48 59 66	— 0 6 5
		98 ♍	11 43 15 47	+ 13 34 6
		♅	12 11 4 18;	12^h 10 22 7 t. m.

Unde

	Afc. ♅ app.	Decl. ♅ app.
die 25. Mart.	189° 9′ 4″ 0	3° 8′ 59″ 3 A
26. —	— 6 40 1	— — 44 0
27. —	— 4 20 4	— 7 42 2
29. —	188 59 29 2	— 5 2 1

Ex his

	Long. ♅ geoc. ver.		Lat. ♅ geoc. ver.
die 25. Mart.	6^s 9° 38′ 21″ 9		44′ 7″ 3 B
26. —	— — 36 3 9	*dub.*	43 24 4
27. —	— — 33 38 2	*dub.*	43 26 8
29. —	— — 28 0 5		43 59 7

Capto errore medio geocentrico e prima et ultima obfervatione; in long. + $19'' 5$; in lat. — $16'' 0$; eruitur tempus

pus oppositionis Uraniæ cum sole 1803 die 30. Marti $15^h6'40''3$ t. med. Viennæ; vel $14^h10'30''3$ t. med. Paris. long. ♅ hel. $6^s9^\circ25'7''2$; lat. geoc. $44'2''9$ B; lat. hel $41'38''2$ B; error tab. hel. in long. + $10''0$; in lat — $15''2$.

Observationes Astronomicæ

factæ a Clar. D. *Taucher* Astronomo, et a D. *Huliman* Astr. Regiæ Adjuncto Budæ Annis 1802 et 1803.

Immersiones & Emersiones Satellitum Jovis.

Ann.	Mens.	Dies		Tempus verum.	Circumstantiæ.
1802	Dec.	6	Imm. I.	$16^h19'14''$	Fasc. bonæ.
		29	Imm. I.	16 16 59	Obs. dubia.
1803	Jan.	31	Imm. II.	14 45 23	Aër ser.
	Febr.	13	Imm. I.	16 22 16	Mediocr.
	Apr.	4	Em. I.	8 2 54	Fasc. bon.
		11	Em. I.	9 59 1	(
		18	Em. I.	11 55 11	(Fasc. distinct.
	Maji	25	Em. II.	11 2 17	(

In his observationibus usus est D. *Huliman* Tubo Newton 7 pedum.

Oc-

Occultationes fixarum per Lunam 1803.

2 **Aprilis** Imm. ν ♌ in part. obſc. 8ʰ 41′ 43″5
9 **Auguſt** Em. ε ♈ in part. obſc. 10 54 40 6
31 **Octob.** Imm. η ♉ in part. luc. 6 55 58 0 undulant. limb.

Emerſionem caſus fortuitus utrique obſervatori eripuit.

Oppoſitio Martis.

Menſe Decembri 1802 D. *Taucher* obſ.

Obſervationi huic tempeſtas adeo iniqua fuit, ut non niſi **duas**, easque plurium dierum intervallo ſejunctas poſitiones determinare licuerit. Ceterum Aſcenſiones rectas et Declinationes, quas tamen licuit, ex comparatione ♂ cum 35 ♈ et φ ♉ deduxi.

Harum poſitiones ſequentes ſumſi.

	Aſc. rect. adp.	*Decl. Bor. adp.*
35 ♈	0ˢ 37° 59′ 8″7	26° 51′ 51″5
φ ♉	0 62 4 20 9	26 52 15 2

Facta cum his fixis comparatione inveni.

Die 21. Decembris.

12ʰ 17′ 57″ 1 T. m. Aſc. rect. adp. ♂ 94° 16′ 37″6 Decl. B. 26° 44′ 46″5

Long. autem veram geoc.	3ˢ 3° 49′ 20″4	Lat. 3° 20′ 11″7
Ex Tab. D. Trieſnecker	3 3 46 22 0	— 3 20 9 0
Diff. Tab.	— 2 58 4	+ 2 7

Die 30. Decembris.

11ʰ 26′ 56″4 T. m. Aſc. rect. adp. ♂ fuit 90° 21′ 36″5 Decl. 27° 0′ 18″2

Long. geoc. vera	3ˢ 0° 19′ 7″0	Lat. B. 3° 32′ 18″0
Ex Tabulis	3 0 16 12 2	— 3 32 24 7
Diff. Tab.	— 2 54 8	+ 6 7

Error proinde medius in longitudinem per defectum 2′ 56″ 6 in lat. per exceſſum 4″7. Hac adhibita correctione lon-

longitudini geocentricæ tabulari, et calculata parallaxi in venitur error Tabb. in long. heliocentrica ex observatione diei 21 = 1′5″2 in lat. hel. + 0″4. Ex observatione vero diei 30 error tabularum est in long. hel. 1′8″7 in lat. hel. + 0″9. Medius proinde in long. hel. 1′6″95 in lat. 0″65. Correcta igitur ab his erroribus long. et lat Tabulari invenitur T. med. oppositionis Budæ die 24 Dec 14h9′35 cum long. hel. 3s2°36′51″3; lat. Bor. 1°17′53″4.

Oppositio Jovis

observata *ab Eodem* 1803.

Contuli diebus tribus continuis Jovem cum sole culminante in eodem fere paralello, atque sequentes erui ♃ ascensiones et declinationes a refractione et parallaxi repurgatas.

Die 22. Martii.

T. m. 12h8′5″0 Asc. rect. adp. ♃ 181°30′1″8. Decl. Bor. 1°5′28″0.

Ex hac observatione assumta obliquitate Eclipt. 23°28′0″4. reperi correctam ab aberratione et nutatione long. geoc. veram ♃

veram ♃ — —	6s	0°	56′	10″	5	Lat.	1°	35′	56″	9
Tab. D. de Lambre	6	0	55	43	1	Lat.	1	35	45	4
Diff. — —				27	4	—			11	5

Die 23 Martii..

T. m. 12h3′41″0 Asc. rect. adp. 181° 22′ 54″0 Decl. 1°8′36″0

Ver. long. geoc.	6s	0°	48′	25″	4	Lat. B. 1	35	55	0
Ex Tab.	6	0	47	57	0	— 1	35	42	0
Diff. — —				28	4	—		13	0

Die 24. Martii.

T. m. 11h59′17″5 Asc. rect. adp. 181° 15′ 46″0 Decl. 1° 11′ 35″0

Ver. long. geoc.	6s	0°	40′	39″	6	Lat. B. 1	35	49	3
Tab.	6	0	40	10	5	— 1	35	38	6
Diff. — —				29	1	—		10	7

Jam

Iam longitudo vera solis ab æquinoctio medio computata fuit pro tempore culm. ♃ fuit die 22 = 0ˢ 1° 22′ 44″8. Longitudo ♃ ab errore med. correcta 6 0 56 11 5

[illegible]

Differentia major sex signis prodit oppositionem ante tempus observationis contigisse. Porro arcus iste conficeri debuit motu composito utriusque sideris intra spatium — — 0 28′ 36″7

Temp. v. obs. fuit 12 0 56 7

Accidit ergo ☍ die 22 [illegible] T. v. seu 2ʰ 32′ 35″7 T. m. Budæ cum long. 6ˢ 0° 59′ 25″6, lat. geoc. 1° 35′ 58″4 et lat. hel. 1° 18′ 24″7. Errore Tab. in long. hel. — 19″0 in lat. — 13″1.

Oppositio Uraniæ

die 30. Martii 1803 obs. *Taucher.*

In comparationem accepi 513 et 528 Mayeri. Fuit porro

	Asc. rect. adp.	*Decl. Aust.*
Stel. 513	185 11 51 0	2° 58′ 26″7
528	192 23 38 8	2 44 58 7

Ex his stellarum positionibus sequentes erui Uraniæ ascensiones et declinationes adparentes.

Dies.	*Mensis.*	*Temp. med. Culm.*	*Ascens. recta adp.*	*Decl. Austr. adp.*
28	Mart.	12ʰ 14′ 34″9	189 2 20 5	3° 6′ 9″0 A.
30	—	12 6 24 1	188 57 35 3	3 4 1 9
1	April	11 58 12 8	— 52 49 3	3 1 58 5
2	—	11 54 7 4	— 50 26 0	3 0 58 0
3	—	11 50 2 0	— 47 52 1	2 59 25 1
4	—	11 45 56 6	— 45 41 0	2 58 56 0
6	—	11 37 45 6	— 40 57 0	2 56 55 5
7	—	11 33 40 4	— 38 32 1	2 55 56 1
8	—	11 29 35 0	— 36 16 5	2 54 57 9

Ex

Ex his calculavi sequentes long. et lat. geoc. veras.

Dies.	Mens.	Long. Geoc. vera.	Lat. Geoc. vera.	Error Tab. D. de Lambre. in long.	in lat.
28	Mart.	6ˢ 9° 31′ 1″7	0° 44′ 8″6	— 10″6	— 12″3
30	—	— — 25 52 2	0 44 10 6	— 11 5	— 15 1
1	April	— — 20 42 9	44 10 4	— 12 7	— 15 7
2	—	— — 18 4 2	44 12 0	— 9 0	— 18 0
3	—	— — 15 30 7	44 9 4	— 10 7	— 15 5
4	—	— — 12 55 7	44 10 4	— 10 2	— 16 9
6	—	— — 7 48 7	44 4 4	— 11 7	— 1? 7
7	—	— — 5 12 2	44 6 9	— 8 0	— 14 6
8	—	— — 2 42 6	44 7 4	— 10 9	— 15 5

Sumto errore med. in long. geoc. — 10″6 in lat. — 15″0 sequitur oppositionem Uraniæ cum sole incidisse in diem 30. Martii 15ʰ25′12″2 T. m. cum long. hel. 6ˢ9°25′30″2 lat. geoc. vera 0°44′10″5 lat. hel. 41′32″0. Error Tab. in long. h. — 10″2 in lat. — 14″3.

Si sumatur Ascensio recta et Declinatio stellarum, quibuscum facta est in hac observatione comparatio, ex Catalogo D. Piazzi, reperitur tempus oppositionis verum 30. Martii 15ʰ 11′ 26″ 1 vel med. 15ʰ 16′ 30″ cum long. hel. 6ˢ 9° 25′ 7″ 6 cum lat. 0° 41′ 41″5. Eritque error Tab. in long. + 12″3 in lat. — 9″6.

Oppositio Cereris

ineunte Julio observ. D. *Huliman.*

Comparatio instituta est ⚳ die 30. Junii cum τ ♐, cujus asc. recta adp. ex Cat. Ill. Zach fuit 283°40′27″73. Decl. ex 3 Catalogis med. 27°56′30″63 Aust. itidem adp. Die vero 3. Julii comparatio facta est cum ρ ♍ cujus asc. rect. ex eodem cat. Zachii fuit 236° 11′ 57″ 89. Decl. 28°37′54″66.

Die

Die 30. Junii.

⚳ fuit in filo verticali	$12^h\ 12'\ 17''49$
τ ♐ culminavit	12 22 29 02
Differentia inter adpulsus	10 11 53
Facit hæc in partibus æqu.	$-\ 2^\circ\ 33'\ 18''13$
Asc. recta adp. τ ♐ est	283 40 27 73
Igitur asc. rect. adp. ⚳	281 7 9 60
Decl. τ ♐ fuit	27 56 30 65
⚳ erat australior	+ 18 23 93
Igitur Decl. ⚳ adp.	28 14 54 58

Ex his

calculata long. geoc. vera ⚳	$9^s\ 9^\circ\ 49'\ 0''6$
Latitudo ejusd.	5 9 37 5

In calculo Long. et Lat. sumta fuit obliquitas Eclipticæ $23^\circ 27' 59''8$. Pro reductione autem long. adp. ad veram adhibita fuit correctio propter aberrationem et nutationem $-\ 17''3$.

Die 3. Julii.

	Temp. med.
ϱ ♍ fuit in horario	$9^h\ 1'\ 18''67$
Culm. ⚳	11 57 34 67
Diff. inter adpuls.	2 56 16 0
Hæc in partibus æqu.	$44^\circ\ 4'\ 17''15$
Asc. rect. adp. ϱ ♍ fuit	236 11 57 89
Igitur asc. rect. ⚳	280 23 15 04
Declinatio adp. ϱ ♍	28 37 54 66
⚳ erat borealior	− 10 30 37
Igitur Decl. ⚳	28 27 24 29

Ex his

Longit. vera ⚳	$9^s\ 9^\circ\ 9'\ 21''5$
Latitudo austr.	5 19 13 5

Jam

Jam 30 Junii 12^{h}12′17″49, quo Ceres culminavit, fuit ab æquinoct. med. computata Long. ſolis 8^{s}8° 5′ 58″1

Long. vera geoc. Cereris	9	9	49	0	6
Elong.		1	43	2	5

Arcus iſte motu compoſito utriusque ſideris conſit 1^{d}11^{h}5′56. Intervallum hoc additum tempori vero culm. planetæ die 30. Junii dat T. v. ♀ 1. Julii 23^{h}15′8″7 vel med. 23^{h}18′37″0 cum long. 9^{s}9°29′36″7 lat. geoc. 5°14′19″3 auſtr. Idem prorſus dat differentia 1°47′35″1, quæ intercedit inter long. Solis et Cereris die 3 Julii tempore ♀ culminantis.

♀ in paralello ζ *Bootis*.

Cujus aſc. rect. adparens ex Cat. Ill. Zach ad diem obſervationis fuit 217°56′22″74. Declinatio B. 14°34′46″52. Ex differentia culminationum et altitudinum Veneris ab ζ *Bootis* accepi

	Temp. med.	*Aſc. rect. ♀*	*Decl. adp.*
Die 7. Junii	21^{h}43′52″5	41°29′44″6	14° 6′53″05
— 8. —	21 44 39 5	42 39 47 0	14 28 54 97
— 9. —	21 45 24 7	43 50 7 4	14 50 47 40

Ex his ſumto motu diurno ♀ 21′47″6 in Declinationem ſequitur centrum ejusd. attigiſſe exacte parallelum ζ *Bootis* die 9. Junii 4^{h}11′48″3.

Longitudines vero et lat. ♀ erant.

Dies.	Long. obſ.	Long. Tab.	Err. Tab	Lat. obſ.	Lat. Tab.	Err. T.
7	1^{s}13°23′34″5	1^{s}13°23′48″9	+ 14″4	1°50′38″9	1°50′48″4	+ 9″5
8	1 14 34 42 7	1 14 34 54 8	+ 12 1	1 49 38 1	1 49 40 6	+ 2 5
9	1 15 46 17 0	1 15 46 28 1	+ 11 1	1 48 32 8	1 48 40 1	+ 7 3

Error igitur medius Tab. D. Triesnecker in long. geoc. eſt + 15″5 in lat. geoc. + 6″4.

Eclip-

Eclipsis Solis
Die 16. Augusti 1803.

Observationem hanc feci favente cœlo. Ope quadrantis 2 pedum, ampliati sectore 4 ped. et 5 ped. tubo instructi. Revolutio una micrometri filaris valet in partibus circ. max. 1'10''5.

Temp. ver. in immers.	Temp. ver. in emers.	Dist. cornuum in micr.	in part. circ.	Quant. obs. in iisd part.	Distantia centrorum
Initium cum mod. incisione $9^h4'25$.	Finis $21^h10'14''$ T. v.				
$19^h15'58''$	$21^h55'52''$	1300	15'16''5	4' 1''9	26'56''6
17 17	53 37	1400	16 27 0	4 43 9	26 14 5
20 6	50 37	1500	17 37 5	5 30 5	25 28 0
24 8	46 47	1600	18 48 0	6 21 9	24 36 7
27 46	43 7	1700	19 58 5	7 18 0	23 40 0
32 46	37 57	1800	21 9 0	8 21 2	22 37 3
38 36	31 27	1900	22 19 6	9 30 9	21 27 6
46 28	22 37	2000	23 30 4	10 48 7	20 9 8

Posita Semidiametro Solis 15'49''5. Semidiametro lunæ 5'2''7. Sed habita ratione augmenti, quod accepit circa medium Eclipsis, distantia minima centrorum ex dimensione correcta cornuum fuit 18'41''5. Ex actuali dimensione partis lucidæ 18'42''7. Proinde vera 18'42''1, cui respondet phasis maxima 12'16''3 seu $4^d39'0$.

P. Huliman initium hujus ejusd. Eclipsis accepit $19^h4'40''15$ cum incisione jam aliqua, quam ex simili phasi circa exitum observata existimavit factam intra 21'' t. v. Proinde initium verum fuisse $19^h4'19''$. Finem accepit $21^h10'8''$. Maxima obscur. notata fuit 12'13''97 id est 4 dig. 37'758.

Ob-

Obſervationes Aſtronomicæ

habitæ in obſervatorio R. Pragenſi 1803 ab Aſtronomo *Aloyſio David*, et Adjuncto *Adamo Bittner*.

David tubo achrom. 7 pedum. Bittner tubo gregor. majori; ut anno priori.

25 Jan.	Imm. II. Sat. ♃	11ʰ 54′ 23″ t. v.	Bittner; faſciæ male viſæ, limbi ♃ non bene terminati.
8 Febr.	Imm. II.	5 2 55 t. v.	David; obſervatio aliquantum dubia, quia circa ♃ nubes tenues, et faſciæ indiſtinctæ.

Sub finem Martii tubus achrom. 7 pedum impoſitus pedi machinæ parallacticæ et inſtructus micrometro circulari, a clar. Seyffert Dresdæ elaborato, pro obſervanda Pallade; unde ſequentes eclipſes Satellitum ♃ David obſervavit tubo Gregor. minori augmenti 40—50es; Bittner vero majori, niſi aliter notetur.

10 April.	Em. I. Sat. ♃	3ʰ 12′ 44″ t. v.	David Gregor. majori; faſciæ male viſæ ♃ tantum 18° alto.
16 —	Em. II.	8 21 9 t. v.	Bittner; faſciæ bene viſæ.
17 —	Em. III.	10 1 9½ t. v.	David Gregor. maj.; ♃ prope meridianum, faſciæ diſtinctæ.
18 —	Em. I.	11 36 12 t. v.	David; faſciæ bene viſæ.
		— 37 2	Bittner.
25 —	Em. III.	2 0 48 t. v.	David; videtur clara luce; faſciæ mediocriter.

4 Maji	Em I.	9 56 8 t.v.	David; fasciæ valde distinctæ, ♃ prope meridianum cœlo plane sereno.
		— — 46	Bittner.

14 Aprilis occultatio τ ♐ a ☾.

Stella ad limb. luc. per intervalla videtur	3^h 15′ 24″	David Gregor. minori.
jam emersa conspicitur	3 22 45	aliquot secundis ser.
— — per intervalla videtur	3^h 17 34	Bittner Gregor. maj.
jam emersa primo conspicitur	3 22 36	

Emersio ι ♈ die 9. Aug. 10^h 43′ 26″½ t. v. Bittner.
Initium eclipseos ☉ 17. Aug. 6 51 9 4 t.v. Bittner tubo Gregor. min.

Hoc momento jam parva incisio limborum observata; ex æquali circiter segmento sub finem eclipseos collegi, verum initium 12″ citius contigisse.

Finis eclipseos 8^h 43′ 1″4
— 42 59 4 a D. de Schönau observatus tubulo achromatico, qui sextanti suo 7 poll. anglicanor. a Troughton, applicari solet.

Sol durante initio ob exiguam suam altitudinem adhuc nebulæ erat immersus; nihilominus tamen Bittner limbum ☉ bene terminatum vidit; in fine eclipseos cœlum penitus serenum. David et emersionem ι ♈, et eclipsim ☉ observavit in monte S. Guntheri ad fines Bohemiæ cum Bavaria.

☍ ♂ 1802 die 24. Dec. observata ab Astronomo *David.*

Observavi ♂ die 11. et 30. Dec. ipso vero die ☍ cœlum erat obductum. Cum vero ex utraque singulari tantum observatione judicium de earum bonitate formari non possit;

ſit; obſervavi adhuc planetam 1803 diebus 11, 12, 13, 14 Januarii.

Loca heliocentrica et geocentrica ſupputavi ex tabulis cel. de la Lande, quæ extant in III. edit. Aſtronomiæ, et ſimul ex tabulis ♂ nepotis ejus, quas idem pro ſua benevolentia et humanitate mecum communicavit.

Comparavi ♂ cum ſtella 6. vel 7æ magnitudinis, cujus poſitionem ope 35 ♈ ex catalogo cel. de Zach, determinavi mediam 1803 die 1. Januarii aſc. 136° 55′ 40″7
decl. bor. 27 4 3 9
Poſitio ejusd. appar. die 12. Jan. mihi obtenta aſc. 136 56 10 5
decl. 27 4 1

1803 Jan.	Temp. med.	Aſc. rect. ♂	Decl. bor.	Long. geoc med.	Tab. min.	Lat. geoc.	T pl
11	10h 22′ 15″ 3	86° 3′ 8″	27° 1′ 45″	86° 28′ 27″	2′ 9″	3° 36′ 33″ ½	1[illegible]
12	— 17 12	85 46 15	— 1 9	— 13 22	2 10	— — 23	18
13	— 12 12 5	— 30 14	— 0 31	85 59 0½	2 2	— — 11	19
14	— 7 15	— 15 0	26 59 51	— 45 27		— 35 58	
14	ope 35 ♈	— 15 2 5	— — 48				

Differunt igitur tabulæ cel. Lalandii in long. 2′ 7″
lat. 0 17 ½
Tabulæ Lalandii nepotis excedunt in long. 0 5″ ½
lat. 0 31

Loca apparentia reducta ad media cum aberr. —2″3 nut. —7 7

Invento errore tabularum (edit. III.) ſupputavi loca heliocentrica et geocentrica die 24. et 25. Decemb. 1802, obtinuique motum diurnum ♂ 23′ 42″4
☉ 61 10 6

Ex tabulis cel. de Zach ſubductis ab epocha 7″2; additis vero 1′27″ ad longitudinem apogæi, longitudines et diſtantias;
motus compoſitus 84′ 53″

24 Dec. $12^h 0' 0''$ t. m. long. ♂ correcta $3^s 2° 37' 15''$ differ. $6' 14''$
☉ cum aberr. 9 2 31 1

motu composito percurruntur $1^h 45' 45''$; unde ☍ ♂ cum ☉ 1802 die 24. Dec. $13^h 45' 45''$ temp. med.

Momento ☍ est ♂ long. hel. $3^s 2° 35' 30''5$ lat. hel. $1° 17' 33''$ bor.
tabular. — — 34 42,9 . . — — 50½
defectus $47''6$ — excessus 17½

Pro supputandis long. et lat. ♂ adhibui obliquitatem eclipticæ apparentem $23° 28' 5''3$; deductam ex media pro anno 1800 die 1. Jan. $23° 27' 58''$; quam Astronomi Parisienses ex suis observationibus definiverunt. (Commerc. litter. rel. de Zach 1802 Jan. p. 30). Eadem obliquitate mecum usus est in ceteris ☍ planetarum Adjunctus Bittner.

☍ ♄ cum ☉ observante David et Bittner.

Ipso tempore ☍ cœlum erat obductum; observavi igitur ♄ die 16, 17, 18 Martii cum stellis 426 ♌, 117 et 118 Sext. e catalogo D. Bode. Collatis ascensionibus et declinationibus cum differentiis earundem ex observationibus deductis, inveni, positionem 426 ♌ et 118 Sext. recte quidem se habere; asc. 117 Sext. vero $30''$, relate ad 426 ♌, justo majorem, declinationem vero $9''$ minorem esse. Ascensionem igitur $30''$ assumpsi minorem, decl. vero reliqui incorrectam. Ope 426 ♌ et 117 Sext. obtinui sequentes ♄ positiones, et cum obliq. $23° 28' 5''$ long. et lat. apparentes.

1803 Mart	Temp. m.	Asc. ♄	bor. decl.	Long. appar.	Tab. +	Lat. bor.	Tab. +
16	$11^h 40' 8''$	$168° 39' 39''$	$7° 22' 38''4$	$166° 41' 32''$	$3''7$	$2° 17' 59''4$	$15''8$
17	— 35 54	— 35 16	— 24 26 3	— 36 49	6 6	— 17 58	18
18	— 31 40	— 31 0	— 26 14	— 31 52	3 1	— 17 57	19 2

Loca appar. reduxi ad media cum aberr. $-13''3$; nut. $-8''6$. Loca heliocentrica et geocentrica ex tabulis de Lambre supputavit Adjunctus Bittner. Error medius tabularum per excessum in long. mihi prodit $4''1$; in lat. $17''8$; his applicatis deduxi momentum ☍.

1803

1803.
die 8 Mart. t. m. 12ʰ 48′ 20″ long. ☉ m. 11ˢ 17° 29′ 39″ 7 mot. diurn. 59′ 52″ 6
correcta ♄ 5 17 18 56 2 — — 4 46 3
Spatio temp. — 3ʰ 58 51 7 percurruntur 10 43 5 mot. com. 1° 4 39
Momentum ☍ 8ʰ 49 28 3 ; long. ☉ 11ˢ 17 19 43 7
helioc. ♄ 5ˢ — — — tab. dant plus 4″ 6
Lat. geoc. 2° 17 44 3
helioc. 2 3 11 3 tab. exced. 10″

Bittner ex ſuis obſervationibus errorem tabular. in long. invenit 0″; in lat. + 16½.

Tempus ☍ 8ʰ 48′ 26″; long. helioc. ♄ 5ˢ 17° 19′ 49″ 8
lat. geoc. 2 17 46 6

☍ ♃ obſervata a David et Bittner.

Comparavi planetam cum s ♌; cujus aſc. a L. B. de Zach definitam ex ejusdem tab. aberrat. deſumſi, adoptando tamen declinationem a la Caille determinatam. Cum hac ſtella obſervavi aliam 6 v. 7æ magnit., cujus aſc. in temp. med. 12′ 40″ 4 minorem; decl. vero 6′ 2″ borealiorem inveni. Poſitiones ♃ ope illarum obtinui ſequentes.

1803 Mart	Temp. m.	Aſc. ♃	bor. decl.	Long. appar	Tab. −	Lat. bor.	Tab. +
22	12ʰ 7′ 43″	181° 29′ 28″	1° 5′ 12″	180° 56′ 5″	16	1° 35′ 24″	17
23	— 3 19	— 22 12	— 8 26	— 48 9	5	— — 30	12
24	11 58 55	— 15 8	— 11 34	— 40 25	5	— — 33½	9

Bittner comparavit ♃ die 20. et 22. Martii cum s ♌ et 281 ex cat. D. Bode; 24. et 25. adhuc cum 359 ♌. Stellam incognitam definivit ope s ♌ mecum fere eadem ratione.

Poſitio apparens harum ſtellarum die 22. Mart. erat

281 ♌ aſc.	163°	23′	26″	decl.	1°	3′	17″	6
307	165	55	40	—	0	59	45	3
359	168	18	40	—	1	12	40	5
incognitæ	162	45	1	—	1	5	47	8

Ex

Ex medio comparationum cum his ſtellis deduxit loca ♃ ſequentia:

1803 Mart	Temp. m.	Aſc. ♃	bor. decl.	Long. appar	Tab. —	Lat. bor.	Tab. +
20	12ʰ17′ 4″	181°43′35″6	0°59′ 9″	181°11′28″5	5	1°35′ 31″	5 2
22	— 8 14	— 29 21 6	1 5 18	180 55 58 5	6	-- — 31 5	5 5
24	11 59 27	— 15 9 7	1 11 34	180 40 27	4 6	-- — 34 5	3 5

Loca appar. reducta ope aberr. et nut. — 19″½ ad media; tabulæ cel. de Lambre in long. minus 5″2; in lat. 5″ plus. David pro errore in long. — 9″; in lat. + 13″. Sumto medio, correctio tabularum in long. eſt + 7″; in lat. — 9″. Cum hac momentum ☍ et loca heliocentrica ſupputavi.

1803.

die 22 Mart. t. m. 0ʰ 7′17″½ long. geoc. ♃ 6ˢ0°59′29″5 mot. diurn. 7′46″5
☉ 0 0 53 39 4 — 59 28 6

Spatio temp. — 2ʰ 4 54 ½ percurritur diff. 5 50

Momentum ☍ 2ʰ12′12″ t. m. long. hel. ♃ 6ˢ0°58′49″ tab. 6″ minus.
lat. geoc. 1 35 32
helioc. 1 18 3 tab. 7½″ plus dant.

☍ ♅ obſervata ab Aſtronomo David.

Planeta comparatus cum ſtellis 79 et 120 Sextantis 6æ magnit. ex cat. clar. Bode p. 52 determinatis a Flamſteedt. Facta comparatione cum aliis ſtellis, vidi, utriusque ſtellæ aſcenſionem 2′ augendam. Differentia aſcenſionis ab obſervata 9″ gradus diverſa; declinationis vero cum obſervata plane coincidit. Cum his duabus ſtellis obſervavi adhuc tertiam, quæ 1803 initio Aprilis in aſc. a 120 Sextantis differebat 28°24′6″7, qua quantitate aſcenſio recta 120 Sext. augenda; in decl. vero ſtella incognita 1′37″6 grad. bor.

Ope harum ſtellarum obtinui ſequentes aſcenſiones et declinationes ♅ apparentes, ex quibus cum obliquitate 23°

23°28′5″ supputavi longitudines et latitudines sumto medio ex utraque ascensione.

Positio prior asc. e 79, posterior e 120 Sext. deducta est.

1803 Apr.	Temp. med.	Asc. rect. ♅	decl. austr.	Long. med.	Tab. plus	Lat. b.	Tab. plus
1	$11^h 57' 52'' \frac{1}{2}$ 1	188° 52′ 32″ 6 20 7	3° 2′ 8″	189° 20′ 24″	3″ 2	43′ 54″ ½	0″
2	— 53 46	— 50 5 49 55	3 1 6½	— 17 45	8	— 53 4	1
3	— 49 40	— 47 39 3 — 33 5	3 0 6½	— 15 11	7	— 52 1	2
4	— 45 35	— 45 24 16 6	2 59 6½	— 12 41	1 7	— 53 1	0

Loca apparentia reduxi ad media cum aberratione —15″ [illegible] nutatione — 8″3.

Excessus medius tabularum cel. de Lambre a clar. Wu[illegible] Gothæ edit. in long. 4″6
lat. 1

1803.
die 31 Mart. Pragæ t. m. 12ʰ 4′ 22″ long. geoc. ♅ corr. 189° 22′ 56″ 8
ex tab. de Zach ⊙ 10 17 3 7
A 30 ad 31 Martii motus diurnus Solis 59 9
Uraniæ 2 34 8
Motu composito 61′ 43″ 8 percurruntur 54′ 7″ spatio 2ʰ 57′ 36″
Unde ☍ ♅ cum ⊙ die 30 Martii temp. med. 15ʰ 1 58
Hoc momento est longitudo ♅ heliocentrica 6ˢ 9° 25 12 4
tabulæ plus 4 8
Latitudo ♅ geocentrica 43 55 7
heliocentrica 41 32
tabulæ eandem suppeditant, et error in latitudine helioc. nullus.

Ob-

Obſervationes Palladis habitæ ab Aſtronomo David et Adjuncto Bittner tubo achrom. 7 pedum, micrometro circulari, a clar. Seyffert, inſtructo.

1803 Mart	Temp. med.	Aſc. R. Pall.	decl. bor.	
24	15h 27′ 20″4	280° 11′ 28″	12° 0′ 34″	cum ι ♌ et ι ♍ ex cat. de Zach.
28	15 18 51 8	280 51 58	12 36 40	α Ophiuchi a Bradley.
Apr.				
1	15 45 6	281 29 41	13 19 12*	cum ζ aquilæ Conn. des tems; 20 aq. cat. Bode.
2	14 50 30	— 38 11	13 31 13 dub.	ζ aquilæ, cujus ope poſitio 19 et 20 aq. correct.
3	14 31 46	— 46 29	13 39 40*	ζ aq. et 19 ex cat. Bode.
4	15 22 29	— 54 45	13 51 13*	cum 19 aquilæ et ſtella 8væ magnitudinis.
5	15 28 33	282 2 36	15 3 42 dub.	cum ſtella 8væ definitæ ope 19 aquilæ.

					media
Poſitio app. ζ aq. 1803 die 1. Apr. erat Aſc.	284°	5′	35″2	—	5′ 29″5
decl. bor.	13	34	39 2		34, 57 6
20 aquilæ	282	30	43 5		
	13	21	58 5		
19 aquilæ ope ζ correctæ	282	26	11 2		
	13	39	15		
Stellæ 8æ magnitud. ope 19 aquilæ	282	10	3		
	18	50	58		

Apr.				
8	15h 39′ 48″2	282° 24′ 39″5	14° 30′ 7″	cum ε aquilæ Conn. des tems.
9	15 48 42	— 31 35 6	14 39 54	ε aquilæ
18	13 53 17	283 19 18 3	16 15 14 6	cum β Serpentis
		— — 30	— — 27	γ — —
Maji				
2	14h 6′ 27″7	283 46 42 5	18° 34′ 55″	cum 111 Herculis cat. Bode.
3	13 0 44 7	— 46 31 5	— 44 32	
4	14 10 5	— 45 48 4	— 53 58	cum 496 Herc. additis ad arc. 2′.
6	13 22 7 8	— 44 6 4	19 13 7	

Ope 111 ſive κ. Herculis determinavi poſitionem appar. ſtellæ 9 vel 10 magnitudinis nempe aſc. rect. 283° 33′ 59″5, decl. bor. 18 30 31 4; cum qua Pall. comparavi die 3 et 4 Maji.

Ope

Ope hujus ſtellæ determinavi aliam 11ta magnitudinis; cujus poſitio appar. die 4. Maji aſc. rect. 283° 51′ 10″ 8; quacum
decl. 18 45 59 4
cum etiam planeta comparatus.

Cum ſtellula 11æ magnitudinis contuli poſitionem 496 Herc. 7æ ex cat. Bode; invenique declinationem ſe utcunque recte habere, aſcenſionem vero 2′ augeri debere. Omnes hæ poſitiones ſtellarum pendent a poſitione 111 Herc. ſive $\varkappa$.

Qui de inſufficientia et incertitudine, qua catalogi ſtellarum laborant, quamprimum Zodiacum egrediuntur, judicium ferre cupit; palladem obſervet*—.

Ardua res eſt, et valde difficilis ope micrometri circularis, differentiam declinationum ſiderum determinare, ſi hæc prope centrum tranſeant; quod incommodum certe maximum eſt propterea, quod præciſe ibi, ubi ſidera clariſſime et diſtinctiſſime videntur, nulla vel mediocris determinatio declinationum fieri poſſit. Huic incommodo, quod omnibus ejusmodi micrometris commune, acceſſit adhuc aliud ei, quo ego uſus ſum; quod campus valde fuerit exiguus pro delineanda figura ſtellarum quibuscum pallas comparari debuit. Diameter circuli interioris nonniſi 28′ capiebat; Pallas initio Aprilis declinationem ſuam 10½′ augebat, unde tertio die jam campum tubi egreſſa, immoto inſtrumento obſervari amplius non poterat; moto autem tubo arduum et incertum erat Palladem conſequi, difficillimum, ſi congeries ſtellarum cum eadem tubum ingreſſa; quod multoties accidit.

His fractus incommodis, nec non difficultatibus, huic micrometro rhombum Bradleyanum die 26 Aprilis ſubſtitui, quem, me manuducente, horolopegus obſervatorii Muller ex laminis orychalcinis elaboravit. Fateor, et hoc micrometrum ſuas difficultates et defectus habere, his tamen non obſtantibus, illud micrometro circulari præfero, præſertim, ſi fila tenuia verticalia eidem inducantur, quibuscum differen-

[r]entiæ aſcenſionum jam ſine illuminatione, jam cum illa ob-[ſ]ervari poſſint. Cardo rei in eo verſatur, interiorem ſuperficiem laminarum accurate ad figuram rhombi efformare.

Ad fila hæc verticalia ☉ culminationem tempore ☍ cum Pall. [d]e die, immoto tubo vero palladis per rhombum de nocte [o]bſervare licuit; et ☉ et Pall. cum eadem ſtella comparare, [e]t poſitionem utriusque ſideris definire.

☍ Pall. cum ☉ die 30 Junii tempore medio $0^h 54' 21''\frac{1}{2}$

[o]bſervata Pragæ ab Aſtronomo David Quadrante murali 7 [p]edum, inſtructo objectivo achrom. et micrometro rhomboidali ex lamellis orychalcinis formato.

Pall. comparata cum ſtella 5 magnitud. Herculis, quæ in [C]at. clar. Bode p. 25. num. 446 occurrit. Poſitionem ejus [a]ppar. 1803 die 1. Julii obtinui: aſc. 273° 29′ 45″
bor. decl. 23 11 35½.

Quo me de recte facta determinatione et reductione hu-[ju]s ſtellæ redderem certum; comparavi eandem 1. Julii cum [p]oſitione appar. π Serpentis deprompta ex Connoiſſ. des [T]ems, quam hac die inveni aſc. 238 27 59
decl. 23 21 34
Diff. aſc. immediate ex obſerv. definita 35 1 30
declinationis 9 52

Aſcenſionem igitur 446 Herc. 16″ aſſumpſi minorem, declinationem vero adhibui incorrectam. Ope ſic correctæ poſitionis deduxi loca apparentia Pall. ſequentia.

1803 Jun.	Temp. med.	Aſc. rect.	Decl. bor.	Long. appar.	Lat. bor.
27	12h 4′ 27″	276° 15′ 41″	23° 13′ 39″	278° 22′ 26″	46° 30′ 50″½
28	11 59 40	— 3 9	— 11 35	278 5 33 4	46 29 27 3
29	11 54 55	275 50 37	— 9 6	277 48 38 3	46 27 41 4
30	11 50 9½	— 38 6	— 6 4	277 31 56	46 25 18 5

Res

Res quam maxime opportuna erat; quod ⊙ his diebus in parallelo Pall. versabatur, sicque cum planeta et stella simul immediate conferri potuerit. Tempus culm. ⊙ et stellæ dabat ascensionem rectam ⊙, ex qua cum obliquitate appar. 23°28′4″4 supputavi long. ⊙ apparentem. Long. ⊙ ex tabulis de Zach, cum correctione jam supra commemorata, obtinui nonnisi 3″4 ab observata discrepantem, quæ differentia observationi potius, quam tabulis tribui potest.

Ex his prodiit mihi motus diurnus ⊙ a 29 ad 30 Junii	57′ 10″6
Pall. vero ex observationibus his diebus immediate	16 46 3
Motus diurnus compositus utriusque sideris	1°13′56″9.
29 Junii temp. med. $11^h54'55''$ erat. ⊙ appar.	97° 8′ 36″7
Pall.	277 48 38 3
Differentia 40′1″6 describitur spatio temp.	$12^h59'26''5$
Momentum igitur ☍ 30 Junii. t. m.	0^h54 21 5
Long. Pall. heliocentrica	277° 39 33 4
Latitudo geocentrica	46 26 24 4

☍ ⚳ cum ⊙ observata ab Adjuncto Bittner Quadrante Wirceburgico 3 pedum, objectivo achrom. et micrometro rhomboidali instructo.

Comparata fuit ⚳ die 2 Julii cum τ ♐, 38 et 234 ♐ e cat. clar. Bode.

Asc. R. app. τ ♐ supputata ex tab. aberr. cel. de Zach	283° 40′ 31″9
austral. decl.	27 56 27 2
Ope hujus stellæ t. m. $12^h6'6''8$ asc. app. ⚳	280 37 52 9
decl. austral.	28 23 9 3
38 ♐ positio appar. suppeditat ⚳ asc. rectam	280 37 46 7
decl.	28 23 11 4

234 ♐ itidem ex cat. clar. Bode dat positionem ⚳ paulo ab his discrepantem; ratio vero non in observatione, sed in erronea positione stellæ versari videtur; ejus ascensio circiter 40″, declinatio vero 60″ a prioribus stellis differt.

Ex

Ex differentia afcenfionis et declinationis obfervata a τ ♐ obtinetur ftellæ 234 ♐ reƈt. afcenfio appar. 288° 4′ 26″ 5
decl. 28 13 36 1
Hac ex pofitione prodit reƈt. afcenfio ⚳ 2 Julii 280 37 47 5
decl. — — 28 23 9 1
Sumto medio arithmetice eruitur reƈt. afc. ⚳ 280° 37 49
decl. auftr. 28 23 10
Cum obliquitate eclipt. apparenti 23° 28′ 0″ 3; long. 279 22 47
auftr. lat. 5 15 55½
Longitudo ☉ ex tab. de Zach, applicatis correƈt. 100° 0 28
motus diurnus — — 57 10½

Ceres quidem etiam 30 Junii et 1 Julii obfervata fuit; ex impedimentis tamen impræviſis obfervationes inter fefe non bene confentiunt. Sumto vero, quodam medio, motu diurno ex his obfervationibus in long. 13′ 12″; qui fere idem eft, quem tabula pro motu ⚳ in ephem. Vienn. 1803 fuppeditat; in lat. 3′ 5″; deducitur, ☍ ⚳ cum ☉ contigiffe 1803 die 1 July $23^h 17' 40''$ tempore medio.

Hoc momento erat longitudo ⚳ heliocentrica $9^s 9° 29' 52''\frac{1}{2}$
latitudo auftral. geocentrica 5° 14′ 17″

Animadverfiones in horizontem ex hydrargyro pro Sextante Hadleyano.

D. de Schönau, antea dux militum ad exercitum cæfareum, cultor eft aftronomiæ praƈticæ et geographiæ. Obtinuit in hunc finem a me Sextantem Troughtonianum 7 poll. ex tribus, quorum alter obvenit clar. Derflinger, tertius vero Prof. Kodefch Leopoli. Cum tabula vitrea, quam naƈtus eft, horizontem conftituens nec perfeƈte plana, nec fuperficiem uniformem præferat, multa experimenta inftituit cum horizonte ex aqua, oleo, et hydrargyro. Aqua faciллime motum tremulum fufcipit, quod itidem de oleo, quamvis non in tanto gradu, eft tenendum.

Si vitro ruftico tegatur, imagines ☉ reflexæ non fatis claræ, et limbi non perfeƈte diftinƈti apparent, quo eorum contaƈtus accurate obfervari queat.

Ima-

Imagines ☉ vero ab hydrargyro reflexæ tam vividæ ſunt ac diſtinctæ, ut eas Sextante intuendo, ☉ diameter tam bene menſurari poſſit, ac ſi quis ſolem immediate contempletur. Quo motum tremulum hydrargyri temperaret, et ſuperficiem magis ſtabilem obtineret, D. de Schönau hydrargyrum ſuperficiei metallicæ affudit, et aqua regia miſtum tam diu fricuit, donec hydrargyrum ſuperficiem metalli arroderet, et ſtatum amalgami indueret.

Phialæ ex cupro, 1 linea pariſ. craſſæ, in hunc uſum ſunt optimæ; inferior ſuperficies æque rotunda vernice obducitur, et phiala annulo 1 dig. alto imponitur, quo facile huc illuc moveri poſſit, donec ſitum horizontalem habuerit. Tanta copia ☿ affunditur, ut ſuperficies phialæ tota undique tegatur; pars ſuperflua una cum pulveribus, qui facile in ſuperficie hydrargyri deponuntur, corio molli abſtergendo aufertur; quo pars ☿ decerpta facile iterum colligatur. annulus vaſculo imponitur, cujus extremitates in altum parumper ſint flexæ.

Major quædam phiala, cujus diameter 5 digitorum, et profunditas 4 linearum, ſine ullo tecto ſervire poteſt aura plene pacata. Minor vero diametri 4 digitorum, et plus 2 lineis profunda, tecto, ex vitro ruſſico formato, imponitur, diebus, quibus aër tranquillus non eſt; imagines ☉ adhuc ſatis lucidæ, et limbi ſat bene diſtincti apparent pro eorum contactu bene obſervando.

Quo plus ſuperficies cupri ab ☿ arroditur, tanto pacatior etiam eſt ſuperficies hydrargyri. Si nocte pacata et ſerena in horizonte vitreo ſtellæ 1æ magnitudinis vixdum diſtinguuntur, in horizonte ex hydrargyro jam ſtellæ 3æ magnit. videntur. An etiam ſtellarum altitudines noctu hoc horizonte obſervari poſſint, nondum experiri licuit; quodſi ita eſſet, horizon hic cuivis alii præferendus foret.

Sit etiam horizon ex tabula vitrea, flante vento paulo fortiori, magis conſtans; imagines tamen ☉ a ſuperficie hydrar-

drargyri lucidiores sunt, et perfectius terminatæ, et, quod vel maxime pensandum, nullum tempus in horizonte libellando insumitur aut perditur. Cui horizon ex tabula vitrea plana bonæ notæ non obtigit, huic horizon hic ex ☿ erit quam exoptatissimus. Qui vero tabula vitrea utitur, eam ope horizontis ex ☿ examinare, ejusque errorem determinare poterit.

Modus hucusque consuetus tabulam vitream examinandi, quo nempe imagines ⊙, si solem Sextante immediate intueris, ad contactum deducuntur; et idem contactus dein in tabula vitrea horizontali observatur; non errorem tabulæ in medio suppeditat, sed superficiei ad margines; quo in examine mihi quidem arduum erat, adeo distinctos et lucidos a reflexione nancisci limbos ⊙, ut accurate definire potuerim, qua quantitate ad invicem limbi accedant, vel recedant.

Ope horizontis ex ☿ facile est errorem tabulæ vitreæ immediate ex ⊙ altitudine meridiana invenire. Deducatur tabula vitrea accurate ad situm horizontalem, eaque penes horizontem ex ☿ collocetur; observetur altitudo unius vel alterius limbi ⊙ in tabula vitrea; immota alhidada Sextantis capiatur eadem in horizonte ex ☿. Si limbi eodem in contactu perseverent, tabula vitrea ⊙ altitudinem recte ostendit; si vero ad se accesserint, vel recesserint, partes nonii indicabunt errorem tabulæ vitreæ, si prius limbi ⊙ ☿ reflexi ad contactum reducti fuerint.

Ita horizontem meum, quem libero Baroni de Zach in ceptis refero, ope horizontis ex ☿, quem D. de Schoenau mihi tradidit, ad examen revocavi.

Observavi 1803 die 16 Oct. horizonte ex ☿ ⊙ altitudinem meridianam, quæ cum refractione clar. Bürg (ephem. Vien. 1798) altitudinem poli Pragæ dabat 50°5′19″6. Stellarum altitudines ope Quadrantis 3 ped. suppeditabant eandem 50° 5′19″. Plures ⊙ altitudines ope tabulæ vitreæ et Sextantis vero 20″.

17 Oct. obſervabam ⊙ altitudinem meridianam ope tabulæ vitreæ limbis accurate ad contactum promotis; mox eundem in horizonte ex ☿ examinavi, viditque, limbos non amplius tam arcte ſe tangere, ſed parum a ſe recedere; quæ ſejunctio indicabat; tabulam vitream ⊙ altitudines justo majores ſuppeditare, quod antea ſemper in omnibus tentaminibus deprehendi. Cum differentia exigua fuerit, alhidadam cochlea non movi, ſed quantitatem erroris, 5 aut 6″ æſtimatione circiter ſum affecutus.

Ex ⊙ altitudine meridiana ope tabulæ vitreæ deduxi elevationem poli Pragæ 50°5′15″4; ſi hæc 5 aut 6″ augeatur; prodit eadem poli altitudo, quam erui ex multis et diverſis temporibus Sextante obſervatis ⊙ altitudinibus.

Si obtenta elevatio poli die 16 Octobris bonitatem horizontis ex hydrargyro comprobat ex una parte; ex altera luculento eſt argumento: quam excellens et præſtans inſtrumentum ſit Sextans Hadleyanus, modo debita dexteritate tractetur.

Ob-

Obſervationes Aſtronomicæ

habitæ *Cremiſani* ab adm. Rev. ac Clar. D.

Thaddæo Derflinger, O. S. B.

Jovis obſervationes, quas ob nubilum cœlum nonniſi poſt plures ab oppoſitione ejus cum ⊙ dies ope quadrantis muralis inſtituere potui, ſunt ſequentes:

Die 27. *Febr.* 1802.

Culm. Temp. med.
2 α ♋ 10ʰ 19′ 44″7
α ♌ 11 29 44
♃ 11 41 3

Aſc.R.app. 2α♋ 131° 55′ 8″7	Decl.app. 2α♋ 12° 37′ 1″2 Bor.
♃ + 20 22 48 9	♃ + 9 53 5
Aſc.R: ♃ 152° 17′ 57″6	Decl. ♃ = 12 46 54 7 Bor.
Aſc.R. app. α ♌ 149 27 54 1	Decl.app. α ♌ 12 55 42 5
♃ + 2 50 21 9	♃ — 8 53 2
Aſc.R. ♃ = 152 18 16 0	Decl. ♃ = 12° 46′ 49″3
Ex m. arith. = 152 18 6 8	Per m.arith. ♃ 12° 46′ 52″0 Bor.

Die 2. *Martii.*

Culm. temp. med.
2 α ♋ 10ʰ 7′ 57″0
α ♌ 11 17 56 5
♃ 11 27 48

Aſc.R.app. 2α♋ 131° 55′ 8″6	Decl.app. 2α♋ 12° 37′ 1″1 Bor.
♃ + 20 0 52 6	♃ + 18 1 8
Aſc.R. ♃ = 151° 56′ 1″2	Decl. ♃ = 12° 55′ 2″9
Aſc.R.app. α ♌ 149 27 54 3	Decl.app. α ♌ 12 55 42 4
♃ + 2 28 27 7	♃ — 46 4
Aſc R. ♃ = 151° 56′ 22″0	Decl. ♃ = 12° 54′ 56″0
Ex m. arith. ♃ 151° 56′ 11″6	Per med. arith. 12° 54′ 59″4

Die

Die 3. Martii.

Culm. temp. med.

2 α ♋ $10^h\ 4'\ 1''1$

α ♌ 11 14 0 6

♃ 11 23 22½

Aſc.R.app.2α♋ 131° 55′ 8″5	Decl.app.2α♋ 12° 37′ 1″1 Bor.
♃ + 19 53 35 1	♃ + 20 59 8
Aſc. R. ♃ 151 48 43 6	Decl. ♃ 12° 58′ 0″9
Aſc.R app. α♌ 149 27 54 3	Decl.app. α♌ 12 55 42 4
♃ + 2 21 6 6	♃ + 2 3 6
Aſc. R. ♃ 151 49 0 9	Decl. ♃ = 12 57 46 0
Per med. arith. 151 48 52 2	Per med. arith. 12 57 53 4

Cum obſervatio altit. 2 α ♋ hac die dubia fuerit, comparationem ♃ cum 2 α ♋ ſatius omittendam duxi.

Aſſumpta obliq. Eclipt. 23°28′2″0 per calc. trigon. ſequentes deduxi long. et lat. Tabulæ tam ☉ quam ♃, queis uſus ſum, eædem ſunt, quæ *Aſtron. de la Lande edit.* III. continentur.

Die	Temp. m.	Long. geoc. v.	Diff. T.	Lat. ver. B	Diff T.	Aberr. &Nut.		
27	11h41′ 3″	4s29°43′59″5	— 9″0	1°17′ 3″9	— 6″0	—11″5	—2″5	Pro converſ.
2	11 27 48	4 29 21 7 3	—10 2	1 17 8 6	—15 0	—11 3	—2 5	long. app.
3	11 23 22½	4 29 13 35 7	— 9 5	1 17 17 1	—14 3	—11 3	—2 5	in veras.

Obſervationes Saturni decimo primum, ab oppoſitione ejus cum ☉ die, ope Quadr. mural. inchoare licuit, quas inſuper ex defectu ſereni cœli non admodum bonas judico; ſunt tamen ſequentes:

Die 5. Martii.

Culm. temp. med.

1 α ♋ $9^h\ 58'\ 87''$

♄ 11 31 52

Aſc.R.app.1α♋ 137° 17′ 0″4	Decl.1α♋ app. 12° 22′ 30″3 Bor.
♄ + 24 37 54 6	♄ — 18 11 9
Aſc.R. ♄ = 155° 54′ 55″0	Decl. ♄ = 12° 4′ 18″4 Bor.

Die

Die 7. Martii.

Culm. temp. med.

1 α ♋	$9^h 45' 45''1$	
♄	11 23 25 1	

Asc. R. app. 1 α ♋	$131° 17' 0''2$	Decl. app. 1 α ♋	$12° 22' 30''8$
♄ +	24 29 5 7	♄ −	14 44 3
Asc. R. ♄	$155° 46' 5''9$	Decl. ♄	$12° 7' 46''0$ Bor.

Die 8. Martii.

Culm. temp. med.

1 α ♋	$9^h 41' 49''2$	
♄	11 19 11 7	

Asc. R. app. 1 α ♋	$131° 17' 0''2$	Decl. app. 1 α ♋	$12° 22' 30''8$
♄ +	24 24 23 8	♄ −	13 4 2
Asc. R. ♄	$155° 41' 24''0$	Decl. ♄	$12° 9' 26''1$ Bor.

Ex his assumpta obliq. Eclipt. $23° 28' 2''0$ sequentes long. & lat. prodiere:

Die.	Temp. m.	Long. geoc. v.	Lat. geoc. B.	Tab. in long.	Tab. in lat.
5	11 31 52	$5^s 3° 16' 50''$	$1° 53' 11''4$	−16 7	−2 8
7	11 28 25	5 3 7 25 9	1 53 17 2	− 6 0	−5 0
8	11 19 12	5 3 2 56 6	1 53 8 7	−13 7	+5 0

Pro conversione long. app. in veras aberr. − 13″0
Nut. + 2 5

Tabulis ☉ et ♄ iisdem, quibus in calc. ♃, usus fui.

Solis Eclipsim die 27 Aug. an. 1802 præter omnem exspectationem observare potui; initium contigit $17^h 28' 17''$ temp. ver.; finis autem $19^h 5' 19''$ temp. ver. Initium, ut plurimum ob multam solis undulationem, serius justo certe observavi; finis autem observationem bonam esse existimarem, si certo mihi constaret, quod non nebula, qua paucis secundis ante emersionem sol involutus erat, sed umbra fuerit, qua sol signato tempore emerserat. Eclipsis lunæ ob ingruentes pluvias observari non potuit, quæ ipsæ etiam observationem occultationis fixæ ι ♒ die 7. Oct. impedivere; mirum sane, cum exceptis his diebus vix umquam nec exigua pluvia deciderit. Reliquæ fixarum occultationes ex

pari

pari serenitatis cœli defectu, observari nequiverant. Haud magis mihi cœlum in observando transitu ☿ per discum ☉ favebat; Mercurius enim non nisi post horam 19nam 59′ temp. veri prima vice in sole conspici poterat; ab hoc momento sæpius illum per fila decussata observaveram. Circa tempus Egressus sæpius sol densis nubibus involvebatur, quæ tamen non obfuerunt, quo minus uterque contactus observari posset; momenta sunt sequentia:

Contactus I. in egressu $0^h 53' 29'' 7$ t. v. seu $0^h 37' 31''$ t.m.; paulo tamen dubitabam, an non jam prius factus sit.

Contactus II. . . . . $0^h 55' 0'' 7$ t. v. seu $0^h 39' 2''$ t.m.; et hic dubitavi, an non uno vel duobus secundis prius contigerit. Cæterum observatio tubo Doll. 10 ped. instituta ob undulationem ☉ admodum difficilis erat. P. Benno Waller eosdem contactus tubo ord. 10 ped. sic observabat: Contactus I. $0^h 53' 33'' 7$ v. t. seu $0^h 37' 35''$ t. m.; putabat, eum prius contigisse. Contactus II. $0^h 54' 58'' 7$ t. v. seu $0^h 39' 0''$ t. m.

Postquam omnes anno hoc currente 1803 occultationes fixarum contigerant, quin ob pluvias et nubilum cœlum vel unam illarum observare potuissem; tandem cœlum eo usque favit, ut Eclipsin Solis die 17 Augusti mane, ab initio usque ad finem sereno semper cœlo observare liceret. Initium et finem tubo Dollond. 10 ped. observavi, et quidem initium die 16 Aug. $18^h 48' 18'' 4$ t. med. seu $18^h 44' 19'' 7$ t. v. videbar mihi limbum ☉ inscissum videre; $18^h 48' 46'' 4$ t. m., seu $18^h 44' 47'' 7$ t. v. autem certe dignoscebatur umbra in sole esse. Finis observatus est $20^h 48' 38'' 9$ t. m., seu $20^h 44' 41'' 1$ t. v.; puto hanc observationem ad duo vel 3″ temp. certam. Durante eclipsi usus sum tubo quadranti affixo, et micrometro filari instructo, eoque observavi appulsus ☉ et ☾ ad fila decussata. Quæ ex iis calculo deduxerim, quamprimum illum absolvero, sistere Tibi præsumam.

Mense

Menſe Junio ad finem vergente Cererem obſervare adgreſſus ſum, ſed conatu inani; illam quippe diebus 1, 2, et 12 Julii in tubo eſſe conſpiciebam; ſed culminationem ejus et altitudinem meridianam obſervare ob defectum luminis, cujus ne tantum quidem, quantum ad illuminanda fila neceſſarium erat, Planeta ſuſtinuerat, mihi prorſus impoſſibile erat.

Sequuntur obſervationes Jovis et Uraniæ circa tempus oppoſitionis.

Die 22. Martii 1803.

Culm. temp. med.

s ♌ 11ʰ 5′ 55″7
♃ 12 8 0 4

Aſc.R.app.s ♌ 165° 55′ 40″3	Decl.Bor. 0° 59′ 45″25
Diff.♃ + 15 33 43 5	♃ + 5 43 88
	eff. refr.&parallax + 1 65
Aſc.R.♃ . 181° 29′ 23″8	Decl. ♃ = 1° 5′ 80″ 8 Bor.

Die 23. Martii.

s ♌ 11ʰ 1′ 59″8
♃ 12 3 35 6

Aſc.R. s ♌ 165° 55′ 40 3	Decl. Bor. 0° 59 45 21
♃ + 15 26 28 5	♃ corr. + 8 48 7
Aſc.R.♃ = 181° 22′ 8 8	Decl. ♃ = 1° 8′ 33 9

Die 24. Martii.

s ♌ 10ʰ 58′ 3″9
♃ 11 59 11 7

Aſc.R.s ♌ app. 165° 55′ 40″4	Decl.Bor. 0° 59′ 45″17
♃ + 15 19 28 5	♃ corr. + 12 1 0
Aſc.R. ♃ . 181° 15′ 8″9	Decl. ♃ = 1° 11′ 46″2

Die

Die 25. Martii.

8 ♌ 10h 54' 8"0
♃ 11 54 47 8

Asc.R.app.8 ♌	165°55'40"4	Decl. Bor.	0° 59' 45"13
♃ +	15 12 24 9	♃ corr. +	15 2 5
Asc.R.♃ =	181° 8' 5"3	Decl.♃ =	1° 14' 47"6

Positio fixæ desumpta est ex catal. Nov. Zod. cel. D. de Zach, et quidem quoad Asc. R. juxta determinationem ejusdem cel. Auth.; quoad Decl. vero juxta de la Caille. Assumpta obliquitate Eclipticæ 23°28'4"7 per calculum Trigonometricum prodeunt sequentes longitudines et latitudines geoc. veræ

T. m.	Long. geoc. ver.	Tab. de la Land ed. III.	Lat. geoc. B.	Tab. eæd.
22 Mart. 12h 8' 0"	6s 0° 55' 34"5	+ 1"3	1 35 41 6	0 0
23 — 12 3 35½	6 0 47 42 5	+12 1	1 35 36 3	+6 3
24 — 11 59 12	6 0 40 0 5	+15 3	1 35 45 5	−2 4
25 — 11 54 48	6 0 32 16 9	+15 2	1 35 43 2	+0 4
Corr. Tab. omissa illa diei 22 Martii, media		−14"2		−1"4

Long. app. conversæ sunt in veras applicando aberr. die 22 et 23 — 11 6 die 24 et 25 — 11 7 Nut. const. — 8 7
Long. ☉ deduxi ex tab. cel. L. B. de Zach, diminuens Epoch. long. 7"25 augens vero long. Apogæi 2'27" et u. ♂ omnino omittens.

Ope motus diurni ♃ — 7'46"3 ☉ vero + 59'29"5; proin motus diurni Compositi 61'15"8 inveni tempus medium Cremif. die 22 Martii 2h4'49"5.

Nam hoc momento erat long. geoc. ver. sec. tab. = 6 0 58 50 8
correctio — 14 2

Long. vera corr. 6s 0° 58' 36"6
Locus ☉ verus 6s 0 58 36 6

Different. 6 0 0 0 0

Longitudo hel. observ. ab illa tabularum differt + 11" 6
Latitudo geocentrica correcta
pro eodem momento erat 1°35'39"4
et proin latitudo hel. 1°18' 9"4. Differ. tab. + 1"2.

Ob-

Obſervationes Uraniæ

Anno 1803 menſe Aprili Quadrante murali circa ſuam cum ☉ oppoſitionem inſtitutæ, et cum Tabulis comparatæ. Planetam cum δ Ophiuchi comparavi, cujus poſitionem ex catalogo Novo fixarum Præcipuarum cl. D. L. B. de Zach excerpſi, ejusdemque Tab. Solares adhibui ita tamen, ut ab Epocha Long. 7"25 ſubtraherem, ad long. Apogæi 2'27" adderem, et equat. ♂ rationem nullam haberem. Ad loca Planetæ determinanda uſus ſum Tab. cel. D. Lambre (Aſtron. par la Lande troiſ. Edit.)

Die 1. Aprilis.

Culm. temp. med.

♅ 11h 58' 8"8

δ Oph. 15 26 9

Aſc.R.app. δ Oph.	241° 1 4"4	Decl. Auſt.	3° 10' 55"5
Diff. ♅ —	52 8 36 0	♅ —	8 39 8
Aſc.R.app. ♅	188 52 28 4	refr. & paral. —	0 8
		Decl. ♅	3° 2' 14"9 Auſtr.

Die 7. Aprilis.

♅ 11h 33' 36"4

δ Oph. 15 2 33 7

Aſc.R.app. δ Oph.	241° 1' 6"8	Decl.	3° 10' 55"6
♅ —	52 8 36 0	♅ —	14 44 8
. . ♅	188° 53' 30"8	refr. & parall. —	1 1
		Decl. ♅	2° 56' 9"7 Auſtr.

Die 8. Aprilis.

♅ 11h 29' 31"1

δ Oph. 14 58 37 9

Aſc.R.app. δ Oph.	241° 1' 7"4	Decl.	3° 10' 55"7
♅ —	52 25 16 9	♅ —	15 42 3
. . . ♅	188° 35' 50"9	parall. & refr. —	1 2
		Decl. ♅	2° 55' 12"2

Ex

Ex his, aſſumpta obliq. Eclipt. 23°28′0″4 deductæ ſunt ſequentes long. et lat. geoc. veræ:

Temp. med.	Long. geoc. v.	Lat. geoc. v.	Tab. Diff. in long.	Tab. Diff. in lat.
1 Apr, 11ʰ 58′ 58″8	6ˢ 9° 20′ 28″2	0° 43′ 45″9	— 1″5	— 2″2
7 — 11 33 36	6 9 4 58 7	0 43 43 2	+ 2 4	— 4 1
8 — 11 29 31	6 9 2 26 2	0 43 42 5	+ 2 3	— 2 0
Correctio med. Tab.			— 1″1	+ 2″7

Reductiones long. app. ad veras ſunt: die 1 aberr. —15″2, nut. — 8 8; die 7 et 8 . —14″9, . — 8 9

Quum oppoſitionem Uraniæ intra 30 et 31 Martii contigiſſe deprehenderem: ut motum diurnum ☉ et Planetæ obtinerem, excitavi ex dictis tabulis loca ☉ et Planetæ ad 30 et 31 Martii 14ʰ58′52 t. m.

Hoc tempore erat long. geoc. ♅ = 6ˢ 9° 25′ 17″8
corr. Tab. — 1 1

Long. ♅ corr. . . 6ˢ 9° 25′ 16″7
☉ 0 9 25 10 4

6″3 = defect. ad ☍

Ope inventi motus diurni ♅ — 2′35″4; Solis + 59′8″4, relativi denique 61′43″8 reperi, ad oppoſitionem requiri adhuc 2′27″0 t. m.; quæ tempori aſſumpto addita produnt, oppoſitionem contigiſſe die 30 Martii 15ʰ1′19″ t. m. Cremiſ.

Erat hoc tempore long. hel. obſerv. ♅ 6ˢ 9° 25′ 16″5 diff. tab. — 1″0
Lat. geoc. 0° 43′ 49″3
Lat. hel. 0 41 26 2 diff. tab. — 2″6

In calculo oppoſitionis Jovis uſus ſum iisdem prorſus Tabulis, et eodem modo, quas in calculo oppoſ. Uraniæ adhibui.

Ob-

Obſervationes Aſtronomicæ

habitæ *Cracoviæ* in obſervatorio Univerſitatis a Joanne Baptiſta *Sniadecki*, Matheſeos ſublimioris et Aſtronomiæ Profeſſore emerito.

Eclipſes Satellitum Jovis.

			Temp. ver.		
1802.	5	Jan.	16h 33′ 17″	Imm. II.	aura ſerena obſervatio certa.
—	16	—	18 57 12 5	Imm. I.	faſciæ diſtinctæ, aura ſerena certa.
—	23	—	10 53 41	Imm. II.	propter nubes aliquantum dubia.
—	1	Febr.	17 18 48″6	Imm. I.	faſciæ non omnino diſtinctæ.
—	3	—	11 37 11	Imm. I.	faſciæ diſtinctæ, aura ſerena obſ. certa.
—	28	—	8h 33′ 38″	Em. I.	obſer. bona licet Satelles ♃ proximus.
—	3	Mart.	16 3 33	Em. II.	faſc. diſtin. certa.
—	19	—	8 13 42	Em. III.	certiſſima faſciæ valde diſtinctæ.
—	21	—	10 39 31	Em. II.	propter nubes tenues aliquantum dubia.
—	28	—	13 18 18	Em. II.	certiſſima faſc. diſtinct. aura ſerena.
—	6	Apr.	12 43 31	Em. I.	valde certa aura pura faſc. diſtinctæ.
—	22	—	10 36′ 33″5	Em. II.	certa aura pura faſ. diſt.
—	—	—	11h 5′ 8″	Em. I.	ita ut præcedens
—	29	—	13 0 56″5	Em. I.	certa faſciæ bene viſæ: aur. ſer.
—	—	—	13 15 16 5	Em. II.	certa ut præcedens.

1802.

		Temp. ver.		
1802. 1	Maji	8 16 44	Em. III.	*valde certa* fasciæ distinctissimæ aura pura.
— 8	—	9 25′ 38	Em. I.	*certa* fas. dis. cœl. seren.
1803. 22	Febr.	12 47 49	Imm. I.	*incerta* fas. haud. distinct.
— 3	Mart.	9 11 48	Imm. I.	*dubia* propter vapores.
— 4	Apr.	8 7 29	Em. I.	*certa* aura pura fas. dist.
— 9	—	15 34 9″5	Em. I.	*certa* fasc. distinctissimæ.
— 11	—	10 2 38	Em. I.	*certa* aur. ser. fasc. dist.
— 16	—	8 43 2″6	Em. II.	*certa* cæl. p. fasc. dist.
— 17	—	10 22 32 5	Em. III.	*certa* aur. p. fasciæ bene visæ.
— 18	—	11 58 59″	Em. I.	*certa.*
— 4	Maji	10 19 17″	Em. I.	*dubia* propter vapores.

Neque Eclipsis Solis in Augusto, neque transitus ☿ in Novembri A. 1802, propter tempus nebulosum observari potuerunt.

Eclipsis Lunæ 11 Septembris 1802.

Temp. ver.
10ʰ 32′ 53″ initium Eclipseos.

Immersio Macularum Lunæ in umbram terræ.

Temp. ver.	
10ʰ 40′ 29″	*Grimaldus* tangit umbram.
10 42 13	*Gassendus* in umbra
10 51 45″	*Tycho* tangit umbram.
10 52 26	. . . totus in umbra.
10 53 44	*Keplerus* ad umbram.
11 0 4	*Copernicus* tangit umbram.
11 6 39	*Aristarchus* ad umbram.
11 7 18	. . . . totus in umbra.
11 10 26	*Albategnius* in umbra.
11 21 8	*Dionysius* ad umbram.
11 21 57	. . . totus in umbra.
11 22 50	*Manilius* tangit umbram.
11 25 52	. . . totus in umbra.

Temp.

Temp. ver.
11 50 [illegible] *Proclus* ad umbram.
11 [illegible] 19 . . . totus in umbra.

Emersio Macularum Lunarium ex Umbra terræ.

Temp. ver.
12^h [illegible] [illegible] *Aristarchus* exire incipit.
12 9 14 . . . totus exivit.
12 17 23 *Plinius* egreditur.
12 [illegible] [illegible] *Eratosthenes* totus ex umbra appparuit.
12 19 53 *Galilaeus* exit.
12 20 31 . . . totus egressus.
12 25 16 *Keplerus* exit.
12 26 52 *Grimaldus* exit.
12 27 13″ *Keplerus* totus exiit.
12 27 40″ *Copernicus* exit.
12 28 7 *Grimaldus* totus exiit.
12 32′ 32″ *Copernicus* totus apparuit. ☽ halonata.
12 46 23 *Proclus* exiit.
12 50 30 *Dionysius* egreditur.
12 51 11 . . . totus emersit.
12 52 3 *Gassendus* emergit.
12 53 56 *Albategnius* emersit.
13 0 5 *Censorinus* emersit.
13 2 9 *Tycho* emergit.
13 3 33″ . . emersit.
13 24 53 Finis Eclipsis *incertus* propter vapores.

Die 14 Junii 1802. Immersio τ ♏ in partem obscuram Lunæ $10^h 33' 54''$ t. v. observatio *certa* Emersio propter nubes invisa.

Observationes Planetarum.

Cœlum nubibus obductum observandis Planetarum oppositionibus ita obstabat, ut Martem semel, Jovem vero bis duntaxat observare datum sit. Cum observationes postremi Planetæ inciderint in ipsum diem ☍, et diem sequentem,

tem, non erit inutile eas hic adferre una cum locis ♃ ex Tabulis *de Lambre* erutis, et cum obſervationibus collatis. Comparatus eſt Jupiter cum fixis ex Uranographia *Bode* excerptis ſcilicet 238 ♌, 281 ♌ et 307 ♌. Poſtremæ fixæ ſcilicet 307 ♌ declinatio erronea eſt; ponit enim cel. *Bode* pro 1. Januarii 1801 eam eſſe 0°59′42″, quæ tamen eſſe debet 1°0′50″2 prout fidem facit Catalogus Baronis *de Zach*, unde poſitio hujus fixæ deprompta eſt. Errore hoc correcto, ſequentes Planetæ poſitiones ex obſervationibus ſunt erutæ.

Die 22 Martii 1803 Cracoviæ t. m. $12^h8'6''$.

A. R. ap. ♃	181°29′15″65	Decl. Bor. app.	1° 5′49″25
Longit. Geoc. ap. ♃	6ˢ0°55′33″4	Lat. Geoc. app.	1°35′55″
Ex Tab. de Lamb. Long.	6ˢ0°55′43 6	Lat.	1°35 46″
Diff. Tab. in Long.	10″2	in Lat.	9″

Locus ☉ eadem die et hora ex Tabulis de Zach 0ˢ1°22′25″73.

Die 23 Martii 1803 Cracoviæ t. m. $12^h3'41''8$.

A. R. ap. ♃	181°22′19″	Declin. Bor. ♃	1° 9′ 4″7
Long. Geoc. obſer. ♃	180°48′ 7″	Latit. ♃	1°36′ 8″
Ex Tabulis Longit.	180 47 58	Latit. . .	1°35′44
Diff. Tab. in Long.	9″	in Lat.	24″

Locus ☉ pro eodem momento temporis 0ˢ2°21′49″.

Motus diurnus Solis ex Tabulis 59′23″23. Motus diurnus ♃ in longitndinem 7′35″25, adeoque motus compoſitus diurnus 66′58″48.

Obſervationes Aſtronomicæ

habitæ *Patavii* a clar. *Vincentio Chiminello*, Aſtronomo in Univerſitate Patavina.

1802 die 13 Januarii η Plejadum contra exſpectationem non eſt occultatum. Stella præcedens limbum lunæ non niſi tangere videbatur, quin occultaretur.

Die

Die 14 Junii Imm. τ ♏ $9^h 57' 2''8$ t. v.
Em. 10 41 48 6 —
Obſervatio bona ope tubi achromat. Dollond. 4 ped.

Die 27 Auguſti Finis Ecl. ☉ $18^h 45' 59'' 5$ t. v.
Obſervatio præciſa eodem tubo.

Initium ob cœlum caliginoſum obſervari non poterat. Neapoli in ſpecula excell. Equitis Acton, cujus latitudo eſt 40°49'40'', eandem obſervationem habuit D. Caſſella tubo Herſcheliano 7 ped.

Init. $17^h 47' 17'' 1$ t. v. *dub.*
Finis 18 31 49 6 — obſerv. bona.

Mercurii Tranſitus per Diſcum Solis 8—9 Novembris 1802 ex obſervationibus Patavina, et Neapolitana ſupputationes *Vincentii Chiminello*, Aſtronomi Patavini.

Die 9 Novembris, quo Mercurii Tranſitus contigit, nubes pertinaces cœlum obſidebant, circa Mercurii ingreſſum nigerrimæ; ſub exitum turgescentes, tempore intermedio Sol alternatim apparebat; Meridie tantum, et Solem, et Mercurium ad Quadrantem muralem obſervare commode potui, et phœnomenon illud etiam clare cernere, quod Dominus Plantade animadvertit in Tranſitu 11 Novembris 1736, ac iterum Dominus Flaugergues in Tranſitu 1786 et 1799, coronam ſcilicet ſubobſcuri ſplendoris circa obſcuratum Mercurii diſcum, quæ ſpecies ab ipſius atmosphæra fortaſſe gignitur, ut ſubobſcurus ipſe ſplendor probare videtur. Bononiæ et Mediolani ne tantillum quidem hujus Tranſitus obſervare potuerunt; Neapoli clariſſimus Caſſella exitum obſervavit; in obſervatorio Piſano et Panormitano de hoc Tranſitu quid agi potuerit, ad me non pervenit; unicam ego meam

meam obſervationem, alteramque Domini Caſſellæ tantum cum ſupputationibus præbeo.

Obſervatio porro Patavina ita ſe habet:

Appulſus limbi ☿ ad 4. fil. T. Mur. $0^h 4' 43''$ t. p.
Exitus limbi ⊙ de fil. eodem — — 0 6 14
Diſt. appar. limbi ſup. ☿ a vertice $62° 1' 15''$
Diſt. centri ⊙ ex limb. ſuper. ac infer. 62 7 11
Barômetr. Poll. 27. $11\frac{6}{12}$ Therm. 15,0
Differentia temporis inter 4. et 3. filum, ut innotuit ex diebus proxime præcedentibus et ſequentibus $37''0$
Semimora tranſ. ⊙ ex iisdem diebus — $1' 8''0$
Refractio pro ☿ — — — — — — 1 48 0
pro ⊙ — — — — — — 1 48 4
Parallaxis horizontalis ⊙ — — — — 8 638
☿ — — — — 12 717
Hinc parallax. altitud. ⊙ — — — — 7 682
☿ — — — — 11 234
Semidiameter ſupput. ☿ — — — — 5 100
Semidenſitas fili verticalis Tubi Mur. — 4 500
fili horizontalis — — — 4 000

Atque hisce adhibitis,
Appulſus limbi ☿ ad 3. fil. T. Mur. $0^h 3' 46''$
Tranſitus centri ⊙ per idem fil. — 0 4 29

Differentia temporis — — — — $43''0$
in grad. — — — — $10' 46''8$
Diſtantia vera centri ☿ a vertice — $62° 3' 0''866$
centri ⊙ — — — 62 8 51 718

Differentia Decl. — — — — 5 50 852
Long. vero ⊙ merid. ex Tab noviſſimis de la Lande addita aberr. $20''$, cum prodeat $7^s 16° 22' 36''50$
ac obliquitas eclipticae app. 23 28 0 15
Coreƈt. A. R. ⊙ — — — — $43° 54' 16''3$
Decl. — — — — — — 16 45 15 050

Hinc

Hinc A. R. ⊙ add. Semid. fili, et Semid. ☿	+ 9″6
et differ. temp. fubtrah. — —	— 10 46 8
prodit A. R. ☿ 43′ ante meridiem —	43° 43′ 39″1
ipfius decl. fubtr. 5′50″852 a decl. ⊙ prodit	16° 39′ 24″198
ex his Long. Geoc. ☿ 43′ ante Merid.	7^s 16° 11′ 11″35
retrogr. pro 43′ ex Tabulis — —	2 39
Long. Geoc. ☿ ad merid. redacta —	7^s 16° 11′ 8″96
Long. Geoc. ☿ merid. ex Tab. noviff. Lande	7 16 10 53 40
Error Tab. in Long. — — — —	— 15 56
Latitudo ☿ geocentrica obfervata —	2′ 40″7
Latitudo ex iisdem Tabulis — —	2 49 0
Error Tabularum in Latit. — —	+ 8 3

Ut hinc verò concludatur Mercurii conjunctio, cum hujusmodi fit ipfius obfervata Longitudo, ac ex Tabulis Longitudo Solis; erat differentia a Longitudine Solis, feu diftantia a conjunctione præterita — —

	11′ 17″54
Long. geoc. ☿ ex Tab. h. 1. ante merid.	7^s 16° 14′ 13″ 7
Merid.	7^s 16 19 53 4
motus hor. ☿ retrogr. — — — —	3 40 3
motus hor. ⊙ tunc — — — — —	2 40 8
motus compofitus — — — — —	5 41 1
ergo dift. temporis a conjunctione ad merid.	1^h 57′ 29″7
atque inftans conjunctionis — — —	22 2 30 3t.v.
quo inftante Long. ⊙ ex Tab. Lande, feu Long. ☿ obfervata — — — —	7^s 16° 17′ 41″18
Long. vero geoc. ☿ ex Tab. Lande noviff.	7^s 16 17 25 65
Unde prodit error Tab. in Long. — —	— 15″53
Long. ⊙ eodem inftante ex Tab. Zach —	7^s 16° 17′ 43″15
ex qua error Tab. ☿ in Long. prodit	— 17 50
Lat. vero hel. ☿ ex Long. hel. obfervata 1^s 16 17′41″18 inclinatione, ac nodo conclufa — — — — — — — —	19″02
atque ex diftantiis ☿ a ⊙, ac a Tellure Latitudo geoc. obfervata — — —	1 4 48
Ipfius latitudo geoc. ex Tabulis —	1 8 15
Error Tabularum in Latit. — —	+ 3 67

Neapoli in Specula excellentissimi Equitis Acton Astronomorum splendidissimi Moecenatis, cujus latitudo 40°49'40'' clarissimus Cassella observare in exitu Mercurii potuit contactum limbi Solis interiorem bene, exteriorem aliquatenus dubie, primum $0^h 54' 7'' 6$ t. v. alterum $0^h 55' 49'' 6$.

Ex contactu itaque interiore, ut tempus conjunctionis concludam, motum horarium in longitudine, ac latitudine modo sumo prodeuntem ab observatione mea, nempe 3' 21''3 et 49''18; motus compositus cum eodem, ut supra, horario Solis evadit 5'52''1 per hunc, et latitudinis motum eruitur inclinatio orbitæ relativæ 7°57'7''5 motus compositus horarius in eadem orbita 5'55''5, et adhibitis canonicis analogiis retenta Latitudine observata, habetur brevior a centro Solis distantia 1'3''87, distantia a conjunctione ad dimidium transitus 8''921, eadem in tempore 1'30''34.

Differentia inter parallaxes horizontales Solis et Mercurii est 4''029, ad altitudinem vero Solis verticalem 31°2'49'' qualis ibi erat Mercurio exeunte evadit 3''449, in Asc. rect. 0''715, in Longitudine 0''746, in orbita relativa 0''753; semidiameter Solis supputata erat 16'12''42; hinc distantia a puncto conjunctionis in orbita relativa ad centrum Mercurii patefit 15'57''092, et tempus huic respondens $2^h 41' 34'' 5$ cujus duplum cum duplo 1'30''34, dat Transitus

durationem totam — —	5^h	26'	9''	68
Porro contactus interior — —	0^h	54'	7''	6
Distantia ab instante conjunctionis —	2	41	34	5
Conjunctio — — —	22^h	12'	33''	1
Patavii — — —	22	2	30	3
Differentia — — —		10	2	8

NB. Inferius determinationes aliæ tutiores videntur.

Methodus hæc adhibendi Mercurii motum, qualem præbent observationes naturalis quidem est, verum quia unica fuit observatio mea, in eamque, in longitudinem scilicet, et latitudinem nonnihil erroris fortasse irrepere potuit,

fuit, tutius erit motus horarios capere potius ex Tabulis, quæ nunc jam conſtitutæ ſatis bene videntur, in quibus etiamſi epocha Longitudinum nonnihil manca fortaſſe ſit, iidem motus æque recte progrediuntur. Ex Tabulis porro Longitudines et Latitudines Mercurii geoc. hora una ante Meridiem, et ex ipſo Meridie, nempe $7^s 16^\circ 14' 13''7$ et $1' 57''5$

	7 16 10 53·4	2 49 0
dant motus horarios — —	3 20 3	0 51 5

eosdem quos adhibui in obſervatione mea computanda; motus horarius Solis $2'30''8$, unde motus compoſitus $5'51''1$; ex his prodit orbitæ relativæ inclinatio $8^\circ 20'41''08$. motus horarius in orbita relativa $5'54''857$. Hisce poſitis, ac latitudine geocentrica adhibita $1'4''48$, quæ ex conjunctione a me obſervata patuit, prodit diſtantia, a puncto conjunctionis in orbita relativa ad centrum Mercurii in contactu interiore addita jam parallaxi $15'56''655$; adhibita vero $1'8''15$ latitudine Tabularum ea diſtantia prodit $15'56''647$; ex prima provenit diſtantia temporis $2^h 41'45''2$, ex altera $2^h 41'45''1$, atque conjunctionis inſtans $22^h 12'22''$, 4 vel 5, differentia Meridianorum $9'52''$, 1 vel 2, quæ probabiliter ad veram propius accedit.

Ita quidem Neapoli, ſi conjunctio ex obſervatione mea ad Patavinum obſervatorium revera contigit in concluſo inſtante $22^h 2'30''3$, cui latitudinem reſpondentem ſumpſi in obſervatione Domini Caſſellæ computanda; verum ſi conjunctio paulisper tardius, aut citius fortaſſe contigit, ac Patavii apparuit, error iterum irrepſit; ergo opportunum erit ſeorſim inſpicere num res ita ſe habere debeat.

Inquiram igitur de inſtantibus conjunctionis, et contactus interioris in exitu primum ex Tabulis, deinde ex hinc concluſis. Differentia Meridianorum Neapolitani et Patavini, ut ex Ephemeride Mediolanenſi 1800 colligo, eſt $9'37''$ temporis; vera, ſive non vera nihil refert, hanc interim ſumo; motus horarii longitudinis et latitudinis iidem ſunt qui ſupra, ideo et orbitæ relativæ inclinatio, et motus in hac orbita. Porro Longitudo Solis $23^h 0'0''$ Patavii, ſeu

23^h

$23^h9'37''$ Neapoli, ex Tabulis de Zach eſt $7^s16^\circ20'7''67$. Lande $7^s16^\circ20'5''70$, longitudo geocentrica Mercurii eodem tempore $7^s16^\circ14'13''70$, latitudo geoc. $1'57'5$; ergo diſtantia a conjunctione præterita $5'53''97$ vel $5'52''0$, ex una prodit diſtantia temporis $1^h0'29''4$, ex altera $1^h0'9''23$, conjunctio $22^h9'7''6$ vel $22^h9'27''77$, latitudo reſpondens ex tabulis $1'5''57$ vel $1'5''86$; mediam ſumo $1'5''71$. Peracto calculo provenit diſtantia a puncto ſuppoſito conjunctionis in orbita relativa ad centrum Mercurii in contactu interiore addita jam parallaxi, ut ſupra, $15'56''4$ tempus reſpondens $2^h41'42''6$, atque ex uno conjunctionis inſtante contactus interior $0^h50'50''2$, ex altero $0^h51'10''37$; hinc diſcrepantia a contactu obſervato $3'17''4$ vel $2'57''23$ ex errore ſive tabularum, ſive differentiæ Meridianorum proficiſcatur; tantundem igitur tempus conjunctionis produci debet, utrumque vero evadit $22^h12'25''0$. Hoc inſtante longitudo ſolis ex Tabulis Zach $7^s16^\circ17'43''91$, ideoque longitudo Mercurii heliocentrica $1^s16^\circ17'43''91$; argumentum latitudinis in ecliptica $18'52''91$, unde ex inclinatione orbitæ veræ $7^\circ0'1''43$ latitudo heliocentrica $2'19''14$, latitudo geocentrica ex diſtantiis Mercurii a Sole; atque a Tellure $1'4''53$.

Ex hac itaque geocentrica latitudine, atque elementis, ut ſupra, ſecundo adhibitis, renovato calculo elicitur diſtantia a puncto conjunctionis in orbita relativa ad centrum Mercurii exeuntis in contactu interiore $15'56''637$, et tempus reſpondens $2^h41'45''02$, quo addito conjunctionis inſtanti prodit contactus interior in exitu $0^h54'10''02$. Porro contactus obſervatus $0^h54'7''6$, qui ſupputatum excedit $2''42$ tantummodo; ergo ommiſſa calculi renovatione conjunctionis tempus ultimo ſuppoſitum ad $22^h12'22''58$ redigi poteſt, quod verum eſſe puto, aut vero ita proximum, ut diſcrepantia pro nulla haberi poſſit; eritque differentia Meridianorum $9'52''28$, eadem fere quam ſupra concluſi.

Quatenus vero ad longitudinem ac latitudinem in inſtante contactus interioris Mercurio exeunte, in quas nondum inquiſivi, elicita modo elongatione a Sole $15'45''71$

cum

cum longitudo Solis ex tabulis Zach tunc fuerit $7^s16°24'30''31$ prodit longitudo Mercurii geocentrica $7^s16°8'44''6$, latitudo item geocentrica $3'23''0$. Longitudo Mercurii supputata tunc erat $7^s16°8'24''84$, latitudo $3'27''2$, hinc error tabularum in longitudine $-19''76$, in latitudine $+4''2$. Si adhibuissem Tabulas Lande pro Solis longitudine in contactu interiore Mercurio exeunte, prodiret longitudo Mercurii geocentrica $7^s16°8'42''63$, atque error Tabularum in longitudine $-17''79$. Hæc ab observatione Domini Cassellæ.

In Nodi longitudinem, atque orbitæ inclinationem non inquiro, cum hæc elementa jam postremis temporibus satis bene determinata fuerint, nec per unicam meam observationem, alteramque Domini Cassellæ accuratiores determinationes dari possint.

Observatio Eclipsis ☉ die 16. Aug. 1803

Patavii observata.

Init.	$18^h29'20''14$ t. v.	præcisa.
Finis	20 36 41 34 —	aliquantum dubia ob nubes.

Excerpta quædam e Commercio nostro literario.

E literis Clar. Piazzi die 30. *Augusti* 1803.

Præcessio media æquinoctiorum, quam plurimis abhinc annis ex quibusdam observationibus meis cum Majeri positionibus comparatis deduxeram, tua vix $0''034$ minor est. Sed mense superius elapso rem eandem alia via aggressus sum. Selectis itaque 100 circiter Majeri declinationibus, easdem cum meis comparavi, ut hinc haberem præcessionem mediam luni-solarem, quam inveni $50''255$; atque hinc directus sectionis Arietis motus ex actione planetarum $0''191$: fatear tamen oportet, motum eundem ex tuæ præcessionis ($50''098$) subtractione deductum, qui foret $0''157$, magis convenire cum imminutione seculari obliquitatis Eclipticæ, quæ habetur ex obliquitate mea pro anno 1800, nempe $23°27'56''5$, cum ea collata, quam pro anno 1756 statuerat Majerus.

Ad

Ad Maskelynii Catalogum quod attinet, tecum mihi omnino eadem est sententia. Catalogus ille pro anno 1770 accurate constitutus fuerat, sed triginta annorum intervallo variationes aliquas ex propriis stellarum motibus (qui adeo certi habendi non sunt, ut nullum omnino relinquant dubium) subiisse minime dubitandum. Perperam igitur ex sola α Aquilæ Ascensione recta ceteræ indiscriminatim corrigi queunt. Singulæ iterum cum α Aquilæ comparandæ, hæcque cum sole. Hoc mihi proposueram anno 1797; sed tanta fuit æquinoctiorum tempore cœli inclementia, ut perpaucas tantum immediate cum sole comparare potuerim. Ex iisdem tamen id tuto inferre posse videor, correctionem scilicet perexiguam esse, nec in omnibus eandem. En differentiæ, quas inveni: Procyon — 1''37 arcus; Pollux — 1''07; Alphard + 0''59, χ Leonis (in meo Catalogo) + 0''67; Denebola + 2''14. Verum cum nunc temporis a Catalogo expeditus sim; rem hanc majori, qua per me licebit diligentia persequar, et sub finem anni proxime futuri, centum stellarum Ascensiones rectas exhibere posse plurimum confido.

Ex meis observationibus solstitialibus ab anno 1792 ad ann. 1803 liquido constat, correctionem nutationis a Perigæo lunari oriundam, quam olim proposuerat Ximenes, locum non habere.

Initium solis defectus die 17 Aug. 1803 observatum a me fuit $6^h 23' 23''5$; finis $8^h 51' 33''0$ t. v. mane *). Observatio tua gratissima mihi erit, ut eam cum mea conferre possim.

E

*) Inito calculo parallactico, et comparatione cum observatione Viennensi instituta inventa est a me differentia Meridiani Panormitani a Parisiensi 44'5''2 in temp., quam proxime ut alias.

Triesnecker.

E literis Clar. Placidi Heinrich die 31 Augusti 1803.

Occasione dimensionis geodeticæ per Bavariam latitudo Ratisbonæ novo conamine ope circuli, quem Gallis multiplicatorem adpellare placuit, stabilita est.

						Latit. Ratisb.
1802.	die 14	Aug.	ex 40	obser. sol. altit.		49 0′ 63″ 466
—	15	—	38	—		49 0 52 700
—	17	—	24	—		49 0 51 777
—	14	—	38	obs. alt. α Aqu.		49 0 58 790
—	15	—	28	—		49 0 60 730
—	17	—	24	—		49 0 57 280
			Ex omnibus media			49 0 57. 457

1803.	die 17 Aug.	Init. Ecl. ☉	6ʰ 42′ 35″	t. m. mane
		Finis	8 37 4	—

Sequentes bujus Eclipsis observationes communicatæ nobis sunt a Clar. Wurm.

Loc. obser.	Init.	Finis		Nom. observ.
Paris.	17ʰ 59′ 18″	19ʰ 46′ 8″	t. v.	Laland. Messier.
Hafniæ	19 5 32 8	20 17 32	ot.m.	Ljunberg *a)*
Brunsvic.	18 44 34 6	— —	t.m.	d'Ende
Weissenstein	18 39 11 0	20 20 46	5—	Com.Schmett. *b)*
Quedlingburg	18 46 46 0	20 28 43	—	Fritsch *c)*
Lilienthal	18 41 11 4	20 15 30	4—	Harding
Norimbergæ	18 33 30 0	20 19 0	ot.v.	Stürmer
Ultraject.	18 19 15 0	19 56 14	0—	Hennert.
Monachii	18 39 12 1	20 35 50	9t.m.	Schiegg *d)*
Tanger	— — —	19 14 15	t. v.	
Kyffhäuserberg	18 45 29 5	— —	t.m.	
Viviers	17 58 26 0	— —	t.v.	Flaugergues
Budissina	— — —	20 45 10	— *e)*	D. Bernhauer
Gedani	19 22 54 0	— —	—	Koch
Lipsiæ	18 50 3 0	20 34 57	t.m.	Bode
Harderwyck	18 25 24 5	20 1 19	5—	de Kragenhoff
Patavii	18 20 22 1	20 36 50	3)t.v.	Gen. de Zach *f*
	— — 20 1	— — 41	3)	Chiminello.

a)

a) Locus observationis 1′ in tempore occidentalior specula, et 1″ aut 2″ borealior.

b) Weissenstein prope Cassellas; latit. 51°19″22; ejus longitudo a Meridiano Parisiensi a me invenitur 28′14″4 in temp., non 35′1″, uti in commerc. lit. Gothano mense Oct. 1803 pag. 352 proponitur.

c) Finis Quedlimburgi quoad minutum primum dubius exhibetur, 28′ vel 29′. Consensus cum observatione initii jubet nos 28′ non 29′ legere.

d) Judicamus initium Monachii observatum minuto esse minuendum, legendumque 18h38′12″1; atque tum invenitur different. a merid. Parisino 36′57″6.

e) Tempus observationis Budissinensis non videtur esse tempus verum, sed medium.

f) Patavii tempus initii 9 minutis mendosum esse videtur, legendumque 18h29′22″, non 18h20′22″.

Observationes sequentes excerptæ sunt ex Ephemeridibus Parisiensibus anni XI.

1798. 21 Augusti	*Mediolani*	Imm. ♃ ♐	7h 33′ 28″5	t. ver.
		Em.	8 28 57	—
	Mirapicii	Em.	7 44 38 7	—
	Elbingæ	Imm.	8 5 10	—
		Em.	9 24 50	—
	Latitudo loci		54° 8′ 20	—
	Hallæ	Imm.	7 25 4	t. med.
		Em.	8 47 2,2	—
	Latitudo loci		51° 28 50	

Eclip-

Eclipses Satellitum Jovis observatæ Massiliæ a D. Thulis.

				Temp. ver.	
1796.	3 Jun.	Em.	IV.	14h 39′ 42″	obs. mediocr.
	11 Jul.	Imm.	I.	14 40 23	fasc. distinct.
	20 Jul.	Imm.	I.	11 1 56	— — —
	27 Jul.	Imm.	I.	12 56 6	— — —
	3 Aug.	Imm.	I.	14 50 20	— — —
	6 Aug.	Imm.	III.	10 40 22	limb. ♃ und.
	7 Aug.	Imm.	II.	12 30 11	limb. mal. term.
	9 Aug.	Imm.	IV.	10 41 49	— — —
	— —	Em.	IV.	15 10 32	limb. ben. term.
	13 Aug.	Imm.	III.	14 40 24	justo citius ob nubes intervenientes.
	14 Aug.	Imm.	II.	15 18 15	limb. ♃ und. per intervalla
	22 Oct.	Em.	I.	9 0 17	vapores
	24 Oct.	Imm.	III.	7 20 52	fasc. sat. bene
	— —	Em.	III.	10 30 37	fasc. minus dist.
	29 Nov.	Em.	III.	6 35 59	limb. ♃ undul.
	— —	Em.	II.	9 16 11	fasc. sat. dist.
	6 Dec.	Imm.	III.	7 17 55	limb. ♃ male term. luna vicina.
	7 Dec.	Em.	I.	9 26 19	limb. ♃ undul.
	24 Dec.	Em.	II.	6 9 41	limb. ♃ male term.
1797.	16 Jul.	Imm.	III.	12 11 13	limb. ♃ male term. et luna vicina.
	— —	Imm.	I.	12 46 21	fasc. vald. dist.
	— —	Em.	III.	14 39 53	— — —
	23 Jul.	Imm.	I.	14 39 39	fasc. dist.
	— —	Imm.	III.	16 12 23	— — —
	1 Aug.	Imm.	II.	12 14 30	— — —
	8 Aug.	Imm.	I.	12 56 25	— — —
	— —	Imm.	II.	14 53 13	— — —

				Temp. ver.	
1797.	21 Aug.	Em.	III.	10h 42′ 30″	limb. ♃ male term. et und.
	24 Aug.	Imm.	I.	11 15 45	limb. ♃ undul.
	28 Aug.	Imm.	III.	12 22 59	obſ. excell.
	— —	Em.	III.	14 43 31	— — —
	2 Sept.	Imm.	II.	12 10 56	faſc. diſt.
	25 Sept.	Imm.	I.	7 59 10	prope diſc. Jov. obſ. dub.
1796.	26 Aug.	Imm. ζ ♉		16 27 57 5	obſ. exact.
1797.	7 Jul.	λ ♐		10 54 46 0	hoc tempore

fixa nonniſi 53″ a limbo inferiore lunæ diſtabat; Maſſiliæ occultationem fixa non eſt paſſa.

—	24 Jun.	Finis Ecl. ☉	6 37′ 17″2	— —

Obſervationes Aſtronomicæ habitæ in Monte Peſſulano *(Montpellier)* a D. *Poitevin.*

			Temp. ver.	
1797.	31 Jan.	Em. I.	5h 55′ 56″	crepuſc.
—	24 Jun.	Init. ☉ Ecl.	5 19 52	
		Fin.	6 29 49	
		Init.	5 20 0	D. Deratte.
		Finis	6 30 9	D. Deratte.

Eclipſis lunæ ibidem obſervata.

			Temp. ver.
1797.	3 Dec.	Penumbræ	14h 52′ 0″
		Init. dub.	14 54 37
		— cert.	14 54 57
	Umbra	ad Grimald.	14 55 41
		ad Heraclid.	15 4 36
		ad Copernic.	15 13 40
		ad Menelaum	15 27 33
		ad Tychon.	15 28 43
		Tycho totus in umbr.	15 30 6

1797.

		Temp. ver.
1797.	ad Promont. acut.	15h 40′ 45″
	ad Mare Crisium	15 45 27
	in medio mar. Crif.	15 47 35
	tot. Crisium in umbr.	15 49 7
	Immerf. total.	15 55 50
	Emerf. dubia	17 24 23
	— — certa	17 26 11
	Grimaldus ex umbra	17 37 29
	Ariftarchus ex umbra	17 44 26
	Copernicus	17 58 39
	Dein nubes.	

Umbra in hac eclipfi erat fatis denfa, et bene terminata.

1797.	5	Dec.	Em.	I.	5	14	57	fafc. vald. dift.
	19	Dec.	Em.	I.	9	0	11	vap. obf. dub.
	28	Dec.	Imm.	III.	8	50	58	fubito difpar.
	—	—	Em.	I.	10	54	45	vap. obf. dub.
1798.	4	Jan.	Em.	I.	7	13	10	obf. bona
	11	—	Em.	I.	9	6	9	— —
	19	—	Em.	II.	5	28	47	— —
	20	—	Em.	I.	5	28	6	crepufc.
	26	—	Em.	II.	8	2	47	obf. bona
	27	—	Em.	I.	7	22	23	— —

Occultationes fixarum, et folis eclipfes obfervatæ et fupputatæ a D. *Flaugergues.*

1791. 15 Jan. Immerfio δ* Tauri $7^h48'29''$ t. ver.; Conjunctio $8^h39'50''$ t. m. *Vivarii;* long. lunæ $3^s7°13'44''$ ab æquinoctio medio computata; error tabularum + 41″o, qua quantitate tabulæ longitudinem justa majorem exhibent.

1791. Eclipfis ☉ die 3. Aprilis. Initium $0^h52'37''$ t. ver. *Vivarii*: Conjunctio vera $1^h4'12''6$ t. med.; longitudo lunæ $0^s13°41'50''$ ab æquinoctio medio computata; error tabul lunar. + 28″6.

1791.

1791. Die 7 Aprilis occultatio δ^{1} Tauri. Immerſ. $7^h22'23''5$. Emerſ. $8^h28'40''$ t. v. Conj. $6^h33'7''1$ t. m. cum longit. $2^s3°56'50''$; error tab. + $53''5$.

1791. 18 Aprilis. Immerſio λ Virginis $13^h41'13''$; Emerſ. $14^h0'14''5$, aut certe limbo lunæ proxima; Conj. $13^h51'9''4$ t. med. long. $7^s4°2'33$; lat. $1°7'41''$ B.; error tab. in long. + $1'4''$; in lat. — $30''3$.

1791. Die 8 Maji. Immerſ. k ♊ $9^h1'29''$ t. v. Conjunctio $8^h24'11''$ t. med. long. $3^s19°40'23''$: error tabularum foret + $1'20''$: unde fortaſſis ſuſpicari licet, occultatam ſtellam aliam, quam quæ hoc nomine indicabatur, fuiſſe.

1791. 31 Aug. Occultatio Mercurii. Immerſio totalis $11^h21'10''$ mane; Emerſio totalis $0^h33'21''$; Conjunctio $0^h58'38''$ t. med. long. $6^s3°25'45''$ ab æquin. medie: error tab. + $22''$, ſi tabulæ Mercurii ſupponantur exactæ.

1792. Die 7 Aprilis. Immerſio Centri Jovis $10^h16'45''$ t. v.; Emerſio $11^h28'34''$; Conjunctio $11^h51'15''$ t. med., quæ comparata cum Pariſienſi a Lalandio ſupputata præbet differentiam meridianorum $9'22''$. Cum longitudo Jovis in ſchola militari obſervata errorem tabul. Jovis manifeſtaverit + $25''$; ſequitur longitudo lunæ in conjunctione $6^s27°34'21''$; et error tabularum lunarium — $15''$.

1798. Die 9 Januar. Immerſ. κ Virginis $15^h48'1''6$; Emerſ. $16^h59'7''3$ t. v. *Vivarii.* Conjunctio inde $17^h38'34''2$ t. med.

1798. Die 26 Dec. Immerſ. η Leonis $11^h16'23''8$; Emerſ. $12^h24'14''9$ t. ver. Conj. $13^h5'29''1$ t. med.; long. $4^s25°5'57''3$ ab æquinoctio medio; ob inflexionem radiorum invenio nonniſi unicum ſecundum demendum; cum $2''$ alias demi ſoleant.

1799. Die 25 Febr. Occultatio δ Scorpii. Imm. $16^h53'45''$; Emersio $18^h6'23''$ t. ver. Conj. vera $17^h55'16''$ t.m.; long. $7^s29°45'58''$; lat. $59'4''$ A. Error tab. in long. $-40''$; in lat. $+7''$. Iidem ad $13''$ et $3''$ deprimuntur, si correctiones Laplacii adhibeantur.

1798. Die 21 Aug. Emers. φ ♐ $8^h2'7''$ t. ver. Conjunct. $7^h38'55''$ t. med.; long. $9^s7°21'44''$ ab æquinoctio medio; error tabular. $+38''6$; is error vix pendet a latitudine, cum differentia latitudinum $1'$ non superaret.

Conjunctiones veræ correctæ sunt ab effectu aberrationis luminis, demendo in calculo a tempore phasis $1''2$ vel $1''3$ pro ratione parallaxium, et temporis, quod lumen, dum a luna ad tellurem perveniat, impendere solet. Positiones fixarum deprompta sunt ex Ephemeridibus Parisiensibus ad annum 8. Denique errores tabulares illas lunæ tabulas respiciunt, quæ exstant in editione tertia Astronomiæ Lalandianæ, sed et longitudine et anomalia media juxta Laplacii sententiam correctis.

De longitudine Neapolis et Ratisbonæ, per Hieronymum Lalandium.

Exhibuimus tomo præcedente calculum occultationis, quæ præbuit differentiam meridianorum inter Neapolin et Parisios $47'31''$. Supputavi etiam occultationem γ Tauri observatam Neapoli a D. Cassella die 21 Oct. 1793. Notaverat is immersionem $10^h29'54''$ t. v. emersionem $11^h36'38''$. Berolini D. Bode observaverat immersionem $10^h44'44''$. Inde deducta est a me conjunctio Neapoli $11^h51'48''$; Berolini $11^h48'19''$. Igitur supposita longitudine Berolinensi a meridiano Parisiensi $= 44'10''$, foret longitudo Neapolis $47'39''$.

D. Ciccolini Romanus, qui apud me astronomiam practicam exercet, supputavit etiam occultationem γ Virginis, observatam Neapoli 1794 die 21 Jan. immers. $13^h26'37''$; emers.

emerſ. $14^h27'8''$; et Berolini immerſ. $13^h15'40''5$ et emerſ. $14^h32'0''$. Invenerat is conjunctionem Neapoli $15^h6'3''5$; et Berolini $15^h2'50''$: atque adeo differentiam meridianorum inter Neapolin et Pariſios $47'23''5$.

Occultationes aliæ dederant $26''$, $31''$ et $36''$. Quare exiſtimo, $47'30''$ adoptari poſſe, et incertitudinem, cui ea longitudo obnoxia eſſe poſſit, eſſe exiguam.

Ratisbona, quanquam memorabilem inter Germaniæ urbes, locum ſortita, nondum habebat ſtatutam poſitionem geographicam. D. Gmeiner ibidem obſervaverat finem eclipſis ſolaris 1797 die 24 Junii $7^h2'35''\frac{1}{2}$ t. v.; ex quo conjunctionem deduxi $5^h13'43''$; eandem erueram ex obſervatione Pariſienſi $4^h35'0''$ per medium e novem determinationibus. Igitur Ratisbona orientalior eſt Pariſiis $38'43''$ *).

Eclipſes Satellitum Jovis habitæ *Vivarii* a D. *Flaugergues*.

				Temp. ver.	
1798.	1 Jul.	Imm.	II.	$14^h53'37''$	ſeren. vald. exact.
	2 Jul.	Imm.	I.	14 29 2	— — —
	26 Jul.	Em.	II.	14 27 27	diſtinct.
	poſt 8'3'' Satelles occultatus eſt a diſco Jovis.				
	28 Jul.	Imm.	I.	12 44 22	vald. exact.
	2 Aug.	Imm.	II.	14 36 25	— — —
	7 Aug.	Em.	III.	15 29 42	— — —
	11 Aug.	Imm.	I.	16 33 10	diluc. exact.

1798.

*) Prædictæ longitudines tam Neapolitana, quam Ratisbonenſis ab iis aliquantum recedunt, quæ in Ephem. Vindob. 1802, pag. 453 et 454 e calculis noſtris proponuntur. Priorem invenimus ex 7 determinationibus $47'44''1$; et Ratisbonenſem e 5 determ. $38'53''0$.

Triesnecker.

				Temp. ver.			
1798. 20	Aug.	Em.	II.	11	39	14	tenues nebulæ.
poſt 13′42″ Satelles infra diſcum Jovis diſparuit.							
—	—	Imm.	I.	12	56	59½	vald. exact.
27	Aug.	Imm.	II.	11	51	2	— — —
—	—	Em.	II.	14	17	23	— — —
poſt 16′35″ Satelles infra diſcum Jovis evanuit.							
—	—	Imm.	I.	14	52	30	— — —
3	Sept.	Imm.	II.	14	30	44	— — —
—	—	Imm.	I.	16	48	0	— — —
12	Sept.	Em.	III.	11	39	33	— — —
—	—	Imm.	I.	13	13	6	tenues vapores
19	—	Imm.	III.	13	55	20	a nube ereptus Satell.
—	—	Em.	III.	15	41	36	vald. exact.
—	—	Imm.	I.	15	9	26	— — —
26	Sept.	Imm.	I.	17	5	33	— — —
—	—	Imm.	III.	17	55	51	diluc.
5	Oct.	Imm.	II.	14	26	5	nebul. incert.
12	Oct.	Imm.	I.	15	26	3	ſeren. vent. val.
—	—	Imm.	II.	17	5	48	— — —
—	—	Imm.	III.	17	7	43	— — —
18	Oct.	Em.	III.	7	56	2	neb. ſat. denſa.
19	Oct.	Imm.	I.	17	21	31	vald. exact.
21	Oct.	Imm.	I.	11	49	34	— — —
23	Oct.	Imm.	II.	9	6	17½	nubes Jovem eripuit
28	Oct.	Imm.	I.	13	44	31	nubes obſ. incert.
1	Nov.	Imm.	III.	14	3	32	vent. validus
4	Nov.	Imm.	I.	15	38	50	vapores ſat. prope ♃
6	Nov.	Imm.	I.	10	6	54	nubes dub.
8	Nov.	Imm.	III.	17	56	34	ſat. diſp. undulante limbo Jovis.
13	Nov.	Em.	I.	14	9	18	ad limb. Jovis
15	Nov.	Em.	I.	8	37	15	prope limb. Jovis
20	Nov.	Em.	I.	16	4	30	toto fere lumine fulget.
22	Nov.	Em.	I.	10	29	29	luna vicina
24	Nov.	Em.	I.	4	58	51	vapor. dub.
1	Dec.	Em.	I.	6	50	2	vald. exact.

			Temp. ver.	
1798.	7 Dec.	Em. III.	11 57 0	per nebulam
	15 Dec.	Em. I.	10 33 42	vald. exact.
	22 Dec.	Em. I.	12 26 38	nub. vald. incert.
	24 Dec.	Em. I.	6 58 40	toto fere lumine corufcat.
	26 Dec.	Em. II.	10 53 19	tenues nubes
1798.	7 Aug.	Em. ✱ 7m. ad 132 ♉	14 36 55½	
	21 Aug.	Em. φ ♐	8 2 7 2	

Hæc emerfio contigit inter duos monticulos, e limbo lunæ prominentes, atque in difci puncto, quod cum Dionyfio et Meffala in eadem linea recta jacet.

1799.	8 Febr.	Imm. ✱ 7m. in ♓	$7^h 44' 35'' 8$ t.m.	vald. exact.
	25 Febr.	Imm. δ ♏	16 53 41. 7 t.m.	exact.
		Em. —	18 6 19	cœl. nubil.
	4 Sept.	Imm. ι^1 ♎	7 29 50 2 t. ver.	
		Imm. ι^2 ♎	8 8 44. 4 —	

Ex obfervationibus L. B. de Zach ftatuitur ad principium anni 1800 afcenfio recta ftellæ Polaris $13°5'15''$ cum motu annuo $3'13''3$, qui quotannis incrementum $1''1$ capit. Ejusdem Declinatio ad eandem epocham habetur ex obfervationibus D. Delambre $88°14'25''7$ cum variatione annua $19''54$ ex obfervationibus deducta.

Diametri Martis et Saturni.

D. Schroetter obfervaverat 1798 diebus 2 et 3 Sept. diametrum Martis $26''2$; unde eandem pro diftantia media deduxerat Lalandius $9''9$, qualem Picardus invenerat; obfervatio D. Rochon præbet $10''2$; fed Herfchelianæ nonnifi $8''8$. Verum obfervationes, quæ in Aftronomia Lalandiana in hunc ufum adhibebantur, fuppeditabant $10''9$. Unde per medium diameter Martis ftatui poterit $10''0$.

Diameter Saturni in directione annuli menfurata a L. B. de Zach 1799 die 14 Nov. $17''24$, pro diftantia media

dia reducitur ad 15''6: quod ipſum ex obſervatione D. Rochon inventum eſt. Bugge non invenerat, niſi 11'', ſed Ceſaris 21''. Unde menſura Zachiana medium quaſi locum obtinet.

Eclipſes Satellitum Jovis obſervatæ *Vivarii* ab Honorato *Flaugergues*.

					Temp. med.	
1799.	24	Jul.	Imm.	I.	$14^h\,23'\,54''$	vapor. hor. dub.
	31	Jul.	Imm.	I.	16 17 58	crepuſc.
	16	Aug.	Imm.	I.	14 33 0	denſa neb.
	21	Aug.	Em.	II.	13 52 49	dubia
	23	Aug.	Imm.	I.	16 28 35	vald. exact.
	1	Sept.	Imm.	I.	12 50 0	limb. ♃ undul.
	4	Sept.	Imm.	II.	16 35 52	vald. exact.
	7	Sept.	Imm.	I.	14 42 45	vald. dub.
	15	Sept.	Imm.	I.	16 37 50	vald. exact.
	24	Sept.	Imm.	I.	12 59 40	exact.
	29	Sept.	Imm.	II.	13 41 53	vald. exct.
	6	Oct.	Imm.	II.	16 17 12	— —
	11	Oct.	Imm.	III.	14 1 57	ſat. nube ereptus
	17	Oct.	Imm.	I.	13 8 20	vap. exact.
	2	Nov.	Imm.	I.	11 22 59	tenuis nebula
	7	Nov.	Imm.	II.	16 0 22	ſat. nube tectus
	9	Nov.	Em.	III.	8 45 1	toto jam lumine fulget.
	—	—	Imm.	I.	13 17 9	faſc. bene viſ.
	14	Nov.	Imm.	II.	18 36 45	nub. diluc.
	16	Nov.	Imm.	III.	9 55 4	tubus vacillans
	—	—	Em.	III.	12 45 52	ad diſc. ♃; toto lumine fulget.
	—	—	Imm.	I.	15 10 23	tenuis nebula
	23	Nov.	Imm.	III.	13 52 56	ſat. a nub. ereptus
	—	—	Imm.	I.	17 4 18	— — —
	25	Nov.	Imm.	I.	11 32 13	tenuis nebula
	29	Nov.	Satelles IV. nullam hac die eclipſim paſſus eſt.			

			Temp. med.	
1799.	4 Dec.	Imm. I.	7 54 58	prope disc. ♃
	16 Dec.	Imm. I.	17 12 19	ad disc. ♃

Longitudo Vivarienſis ſupputata eſt a D. Flaugergues ex eclipſibus ad hanc rem maxime idoneis. Media e 15 determinationibus eſt $9'23''7$ a Meridiano Pariſienſi; dimenſiones Per Galliam dederant $9'22''9$.

Ex Ephemeridibus Pariſienſibus anni XII.

Eclipſes ab Hieronymo Lalande ſupputatæ. Occultatio Jovis 1788 die 14 Martii Skaræ in Suecia obſervata (immerſio totalis $5^h52'30''$; init. emerſ. $6^h54'0''$) præbet conjunctionem $6^h7'23''$, et differentiam meridiani a Pariſienſi $44'51''$.

Patavii Immerſio totalis $5^h43'34''$, et emerſio totalis $7^h0'37''$ dedit conjunctionem $6^h0'59''$; et long. a Merid. Pariſ. $38'27''$.

Bagdadi Immerſio totalis $8^h59'56''$ et emerſio totalis $10^h1'24''$ a D. Debeauchamp obſervata ſubminiſtrat conjunctionem $8^h11'35''$; aut potius e ſola immerſione $8^h10'20''$; et long. a mer. Pariſ. $2^h47'45''$; cum alias $2^h48'5''$ ſtatuta eſſet.

Ex emerſione φ ♐ 1798 die 21 Aug. Lilienthalii obſervata $8^h29'52''$ t. med. ſequitur conj. $7^h53'11''$ t. ver. et differ. merid. a Pariſ. $26'31''$; cum alias $26'14''$ inventa eſſet. Pronum eſt ſuſpicari, emerſionem aliquanto tardius notatam fuiſſe, quod in ſtellis exiguis ſæpe contingere ſolet.

Ex occultatione α ♉ 1794 die 7 Martii Neapoli obſervata (Imm. $7^h43'35''3$; emerſ. $8^h55'26''4$ t. ver.) invenitur temp. conj. $7^h15'6''$ et differ. merid. $47'35''$.

1798 die 21 Aug. obſervata eſt immerſio φ ♐ $7^h30'40''$; emerſio $9^h0'2''$. E ſola immerſione (nam emerſio tardius notata fuiſſe videtur) obtinetur conjunctio $8^h14'3''$ et diff. merid. $47'23''$.

1794.

1794 die 5 Martii obſervata eſt Mediolani immerſio μ Ceti 7ʰ41′28″ t. v. et Neapoli 8ʰ14′0″. Conjunctio pro Mediolano invenitur 6ʰ45 15″ et pro Neapoli 7ʰ5′26″; unde diff. merid. Neapolitani a Pariſienſi 47′36″.

De obliquitate Eclipticæ.

D. Mechain, cum eſſet in Hiſpania, obſervaverat in arce Mont-jouy prope Barcinonem circa ſolſtitium brumale diſtantias ſolis a vertice; e quibus reſultat ad 1792 21 Dec. obliquitas media — 23°27′52″08.

Anno ſequenti easdem diſtantias obſervaverat Barcinone, unde eruitur ad 1793 21 Dec. obl. media 23°27′51″00.

1799 circa ſolſtitium æſtivum D. Michael Lefrançais Lalande ex 86 obſervationibus invenerat obliquitatem eclipticæ apparentem 23°28′7″3.

Eodem anno 1799 D. Mechain circa ſolſtitium brumale ex obſervationibus in ſpecula nationali habitis invenit obliquitatem apparentem 23°27′54″7.

Ex obſervationibus Veneris circa conjunctionem inferiorem habitis Montalbani anno 1799 die 7, 14 et 15 Oct. eruitur tempus conjunctionis veræ die 16 Oct. 18ʰ14′46″1 t. med. Montalbani; long. Veneris 6ˢ23°53′23″1 ab æquin. med.; et lat. 7°0′19″8 A.

Elementa orbitæ Cometæ 1799 obſervati

	juxta D. Mechain	*juxta L. B. de Zach.*
Nodus	3ˢ 9° 31′ 59″	3ˢ 9° 27′ 19″
Inclinatio	50 55 37	50 57 30
Perihel.	0 3 39 12	0 3 39 10
Tranſ. per Perihel die 7 Sept.	5ʰ 59′ 9″ t. med.	5ʰ 43′ 25″ Pariſ.
Diſt. perihelia	0,839865	0,840178
Motus retrogradus.		

Ele-

Elementa orbitæ Cometæ alterius 1799 obſervati a D. *Mechain*.

Nod. aſc.	$10^s 26° 49' 11''$			
Loc. Perih. in orb.	6	10	20	12
Inclinatio orbit.		77	1	38

Diſt. Perihel. 0,625802. log. 9,7964370

Tranſ. per Perihel. 1799. die 25 Dec. $21^h 40' 10''$ t. med. Pariſ.

Motus retrogradus.

Eclipſes Satellitum obſervatæ *Vivarii* a D. *Flaugergues*.

				Temp. med.	
1799.	20 Dec.	Em.	I.	$8^h 22' 41''$	vap. ad diſc. ♃
	— —	Em.	II.	10 18 9	neb. vald. incert.
	22 Dec.	Em.	III.	8 42 29	lum. jam vivid.
	25 Dec.	Em.	I.	15 49 26	lum. vald. notab.
	27 Dec.	Em.	I.	10 16 50	ſeren. vent. valid.
	29 Dec.	Em.	III.	11 42 26	exact.
1800.	10 Jan.	Em.	I.	14 7 40	lum. vald. notab.
	12 Jan.	Em.	I.	8 34 42.	exact.
	17 Jan.	Em.	I.	16 2 20	vald. incert.
	19 Jan.	Em.	I.	10 29 15	vald. exact.
	21 Jan.	Em.	II.	10 6 37	vap.
	26 Jan.	Em.	I.	12 24 20	vald. exact.
	28 Jan.	Em.	I.	6 53 11	obſ. excell.
	— —	Em.	II	12 44 3	vapor. bon. obſ.
	2 Febr.	Em.	I.	14 19 54	vap. obſ. dub.
	3 Febr.	Imm.	III.	5 49 5	crepuſc. obſ. bon. incl. 2°48′52″
	— —	Em.	III.	8 45 39	nub. rar. obſ. bon. incl. 2°48′59″
	4 Febr.	Imm.	IV.	6 9 36	excell. obſerv.
	— —	Em.	IV.	7 5 13	— — —
	— —	Em.	I.	8 48 3	excell. obſ.
	— —	Em.	II.	15 23 17	neb. incert.

1800.

					Temp. med.	
1800.	22	Febr.	Em.	II.	$9^h 57' 45''$	incert.
	1	Mart.	Em.	II.	12 35 8	obſ. dub.
	15	Mart.	Em.	I.	7 22 39	neb. ♃ diſt.
	18	Mart.	Em.	III.	8 52 58	obſ. bon.
	22	Mart.	Imm.	III.	9 50 50	— —
	23	Mart.	Em.	II.	9 42 53	obſ. vald. bon.
	7	April.	Em.	I.	7 37 51	♃ bene termin.
	14	April.	Em.	I.	9 33 25	vent. valid.
	27	April.	Em.	II.	9 28 26	aliqu. tardius
	7	Maj.	Em.	I.	9 48 37	in vap. hor.
	—	—	Imm.	III.	9 49 40	vald. incert.

Eclipſis Sat. IV. die 4 Febr. 1800 erat memorabilis, quia prima poſt aliquos annos erat, et in limitibus umbræ contigerat. Duratio ex obſerv. D. Flaugergues erat $55' 37''$; juxta D. Mechain $43'\frac{1}{2}$; ſed juxta tabulas D. Delambre nonniſi $11'$.

1799. die 4 Sept.	Imm. ι¹ ♎	$7^h 28' 31'' 9$	t. med.
	Imm. ι² ♎	8 9 25 7	—
1800. die 5 Maji	Em. η ♍	10 56 51 3	—
		aliquant. incerta.	

De lumine fixarum.

Inter obſervationes, quas Alexander de Humboldt Berolinenſis ex America transmiſerat, habentur ſequentes de lumine ſtellarum auſtralium.

Suppoſito lumine Sirii = 100, Canopus habet 98, α Centauri 96, Achernar 94, Procyon 88, α Gruis 81, α Pavonis 78, β Gruis 75, Tucana 70, Phœnix 65, γ Gruis 58, α Indi 50, β Indi 47. Utitur is methodo ab Herſchelio indicata. Judicat is, complures earum ſtellarum mutationem quoad magnitudinem ſubiiſſe, ex quo tempore Caillius easdem obſervaverat. Sed pronius eſt, judicare, addit Lalandius, aſtronomum hunc non omnem curam ad hanc comparationem adhibuiſſe.

Eclip-

Eclipſes Satellitum Jovis obſervatæ Maſſiliæ
a D. *Thulis.*

					Temp. ver.			
1798.	1	Jul.	Imm.	II.	14^h	56′	17″	limb. ♃ undul.
	12	Jul.	Imm.	I.	14	31	30	obſ. bon.
	19	Sept.	Imm.	III.	13	57	16	— — —
	—	—	Imm.	I.	15	12	2	— — —
	—	—	Em.	III.	15	44	9	— — —
	19	Oct.	Imm.	I.	17	24	2	— — —
	21	Oct.	Imm.	I.	11	52	44	— — —
	23	Oct.	Imm.	II.	9	8	24	— — —
	1	Nov.	Imm.	III.	14	7	46	— — —
	6	Nov.	Imm.	I.	10	10	15	— — —
	8	Nov.	Imm.	III.	18	4	38	obſ. dub.
	19	Dec.	Em.	II.	8	21	59	nub. ♃ male term.
	22	Dec.	Em.	I.	12	28	37	raræ nubes
1799.	9	Jan.	Em.	I.	5	8	52	crepuſc.
	13	Jan.	Em.	II.	5	20	51	obſ. bon.
	14	Jan.	Em.	I.	12	33	26	obſ. mediocr.
	16	Jan.	Em.	I.	7	1	42	obſ. bon.
	19	Jan.	Imm.	III.	9	40	8	— — —
	—	—	Em.	III.	11	48	13	limb. ♃ mal. term.
	27	Jan.	Em.	II.	10	32	29	obſ. mediocr.
	8	Febr.	Em.	I.	7	13	57	faſc. diſt.
	22	Febr.	Em.	I.	11	7	26	obſ. mediocr.
	24	Febr.	Imm.	III.	5	53	20	crepuſc. obſ. bon.
	—	—	Em.	III.	7	57	16	obſ. bon.
	28	Febr.	Em.	II.	10	17	11	faſc. non bene
	6	Oct.	Imm.	II.	16	31	43	obſ. bon.
	10	Oct.	Imm.	I.	11	30	32	faſc. diſt.
	17	Oct.	Imm.	I.	13	25	25	obſ. bon.
	7	Nov.	Imm.	II.	16	19	42	— — —
	9	Nov.	Em.	III.	8	59	31	obſ. mediocr.
	14	Nov.	Imm.	II.	18	54	56	diluc.
	16	Nov.	Imm.	III.	10	12	43	obſ. bon.
	25	Nov.	Imm.	II.	10	48	8	nub. per intervall.

1800.

					Temp. ver.		
1800.	21	Jan.	Em.	II.	$9^h 58' 6''$	obſ. mediocr.
	26	Jan.	Em.	I.	12 14 37	faſc. diſt.
	28	Jan.	Em.	I.	6 42 22	obſ. bon.
	—	—	Em.	II.	12 33 16	— — —
	3	Febr.	Imm.	III.	5 37 15	obſ. bon.
	—	—	Em.	III.	8 33 46	— — —
	4	Febr.	Em.	I.	8 36 30	— — —

Eclipſis Sat. IV. hoc die in Ephemeridibus prænuntiata, locum non habet, niſi quoad aliquam ſui partem. Hora 5 m. 32 t. ver. jam multum de lumine ſuo amiſerat, deinceps autem ita debilitabatur, ut nonniſi per intervalla conſpiceretur. Obſervatus eſt Satelles usque ad horam 6 t. v. quo tempore lumen ſuum recuperare incipiebat. Tempus erat ſatis propitium. Jovem ambiebant nubes raræ, cujus etiam limbus aliquantum undulabat; ſed ceteri Satellites clare conſpiciebantur.

					Temp. ver.	
	1	Mart.	Em.	II.	$12^h 24' 29''$	obſ. mediocr.
	25	Mart.	Imm.	III.	9 47 10	obſ. bon.
	26	Mart.	Em.	II.	9 41 7	— — —
	14	April.	Em.	I.	9 36 21	— — —
1797.	7	Aug.	Imm.	ε ♑	8 28 56 7	luna fere plena.
1799.	25	Febr.	Imm.	δ ♏	16 58 18 3	obſ. exact. luc.
			Em.	—	18 10 40 0	diluc. nubes.
	21	April.	Imm.	δ ♏	10 13 0 0	exact. luc.
			Em.	—	11 16 20 7	exact. obſ.
1800.	5	Maji.	Imm.	η ♍	10 13 2 0	obſc. exact.
	3	Jul.	Imm.	σ ♏	12 58 51 0	obſc. exact.

1799. 23 Nov. occultatio Veneris

	Imm. in part. luc.		Emerſ. ex part. obſc.
Cornu I.	$16^h 22' 23''$	t. v.	$17^h 20' 31''$
Cornu II.	16 22 50	—	17 20 57
Limb. luc.	16 23 16	—	17 21 15

Tran-

Transitus Mercurii 1799 die 6 Maji.

Primus Contact. ext. dub.	21^h 33′ 8″0 t.v.
Primus Contact. intern. cert.	21 35 54 0
Alter Contact. intern. dub.	4 54 10 0
Alter Contact. ext. dub.	4 56 45 0

Eclipsis lunæ 1800 die 2 Oct. Mirapici (*Mirepoix*) observata.

		Temp. ver.
Immersiones		
Initium		9^h 13′ 55″
Umbra	ad Platonem	— 24 15
	ad Centr. Platon.	— 25 5
	ad Helicon.	— 25 30
	Plato totus in umbra	— 25 55
	ad Centr. Heraclid.	— 29 45
	ad Centr. Aristot.	— 30 40
	ad Centr. Eudox.	— 36 35
	ad Centr. Herm.	— 48 55
	ad Possidon.	— 54 40
	ad Centr. Possidon.	— 57 50
	ad Messalam	— 58 30
	Tot. Possidon. in umbr.	10 2 20
	ad Cleomedem	— 14 25
Emersiones	Helicon ex umbra	— 16 0
	Centr. Possidon.	— 26 45
	Prim. limb. Platon.	— 27 50
	Tot. Possidon. ex umbra	— 28 55
	Centr. Platonis	— 29 45
	Tot. Plato ex umbr.	— 31 0
	Centr. Eudox.	— 35 50
	Centr. Cleomed.	— 37 45
	Centr. Aristot.	— 41 0
	Centr. Messal.	— 53 0
	Centr. Herm.	— 54 10
	Finis Eclipsis	— 59 40

Se-

Sequentes obſervationes depromptæ ſunt ex Ephemeridibus Berolinenſibus anni 1804.

Plures obſervationes, quæ a Schroettero Lilienthalii circa Mercurium ſunt inſtitutæ, confirmant tempus rotationis circa axem hujus planetæ, quod antea 24h 5′ 30″ inventum erat.

Obſervationes aſtronomicæ in ſpecula regia Berolinenſi habitæ annis 1799 et 1800.

1799.	*Temp. med.*	*Long. vera geoc.*	*Lat. vera geoc.*	*Error tab. in long.*	*in lat.*
♄ 13 Jan.	12h 5′ 26″	3s 22° 42′ 29″	0° 2′ 34″ B	+4″	+6″
Inde ☍ ♄ die 12 Jan. 10h 11′ 44″ t. med.					
♀ 18 Jan.	0 30 56	10 3 0 53	1 10 27 A	+18	+10
♅ 10 Mart.	12 11 11 6	5 20 17 50	0 48 40 B	0	−8
Hinc ☍ ♅ die 10 Mart. 9h 8′ 16″ t. med.					
☿ 31 Mart.	0 41 54 6	0 21 3 57	0 19 35 B	−24	−25
♃ 19 Dec.	11 49 0 6	2 26 7 3	0 19 47 A	−22	−23
Inde ☍ ♃ die 17 Dec. 17h 25′ 16″ t. med.					
1800.					
♄ 22 Jan.	12 30 41	4 7 7 50	0 42 36 B	+11	+7
Inde ☍ ♄ die 26 Jan. 10h 36′ 55″ t. med.					
♀ 10 Febr.	21 18 48 9	9 10 6 39	1 37 32 B	+19	−22
☿ 19 Febr.	23 38 34 1	10 21 38 51	2 6 44 A	−2	+1
♃ 12 Mart.	6 6 48 2	2 22 24 53	0 6 57 A	+3	−6
♅ 16 Mart.	12 6 9 3	5 25 2 32	0 47 46 B	−18	+3
Inde ☍ ♅ die 15 Martii 10h 27′ 49″ t. med.					

Occultationes fixarum Berolini tubo Doll. 3½ ped. obſervatæ.

1799.	13 Jan.	Imm. μ ♓	10h 23′ 54″	veſp.	t. m.	obſc.
—	6 Maji	Imm. υ¹ ♉	8 20 2	veſp.	—	obſc.
—	7 Jun.	Imm. ✶ exig. ad ξ ♋	10 28 45	veſp.	—	obſc.
1800.	12 Mart.	Imm. η ♍	1 33 44	mane	—	luc.
—	5 Maji	Imm. η ♍	13 23 36	t. ſider.		obſc.
		Em.	14 28 59		—	luc.

Eclip-

Eclipses Satellitum ♃ Berolini observatæ.

					Temp. med.	
1799.	19	Jan.	Imm.	III.	10ʰ 30′ 31″	vesp. fasc. distinct.
	20	Jan.	Em.	II.	8 40 12	vesp. ♃ tremul.
	30	Jan.	Em.	I.	11 35 18	vesp. fasc. clar.
	8	Febr.	Em.	I.	8 1 3	vesp. fasc. bene
	10	Mart.	Em.	I.	10 13 58	vesp. ♃ in vapor.
	27	Nov.	Imm.	I.	6 33 16	vesp. fasc. sat. bene
	27	Dec.	Em.	I.	10 54 29	vesp. fasc. vix visæ
1800.	20	Febr.	Em.	I.	7 42 25	vesp.
	6	Mart.	Em.	I.	11 33 29	vesp. fasc. dist.
	15	Mart.	Em.	I.	7 57 0	vesp.
	22	Mart.	Em.	I.	10 52 53	vesp. seren.
	29	Mart.	Em.	I.	11 49 13	vesp. fasc. dist.
	7	Apr.	Em.	I.	8 12 47	vesp.
	20	Dec.	Em.	IV.	5 4 24	mane seren.
	24	Dec.	Imm.	I.	9 59 43	vesp.

Observationes astronomicæ Gedani habitæ
a D. *Koch*.

Ex observationibus Martis mense Nov. 1800 habitis sequitur oppositio Martis cum sole die 8 Nov. 14ʰ0′12 t.m. cum long. 1ˢ16°25′36″ ab æquinoct. medio

1801	die 30 Martii	Imm.	α ♍	15ʰ 21′ 32″	t. ver.
		Em.		16 27 44	—
—	24 Maji	Imm.	α ♍	10 27 39	—
		Em.		11 37 9	—

Momenta præcipua 13 Transituum Mercurii ante discum ☉ seculo 19ⁿᵒ e calculis *Schuberti* Academici Petropol.

Tempora sunt ad Meridianum Parisiensem adcommodata.

I. Transitus ☿ 1802.

Temp.	ver. med.	Transit.	8	Nov.	21ʰ 22′ 15″
Temp.	ver.	Cont. I. ext.	8	—	18 37 7
—	—	Cont. II. ext.	9	—	0 7 23
—	—	Cont. I. int.	8	—	18 38 50
—	—	Cont. II. int.	9	—	0 5 40
	Duratio totalis			—	5 30 16

II. *Transitus* ☿ 1815.

Temp. ver. med. Transit.	11	Nov.	14^h	55′	55″
— — Cont. I. ext.	11	—	12	40	3
— — Cont. II. ext.	11	—	17	11	46
— — Cont. I. int.	11	—	12	42	9
— — Cont. II. int.	11	—	17	9	41
Duratio totalis		—	4	31	43

III. *Transitus* ☿ 1822.

Temp. ver. med. Transit.	4	Nov.	14	49	43
— — Cont. I. ext.	4	—	13	24	15
— — Cont. II. ext.	4	—	16	15	10
— — Cont. I. int.	4	—	13	27	41
— — Cont. II. int.	4	—	16	11	44
Duratio totalis		—	2	50	55

IV. *Transitus* ☿ 1832.

Temp. ver. med. Transit.	5	Maji	0	29	42
— — Cont. I. ext.	4	—	21	3	11
— — Cont. II. ext.	5	—	3	56	13
— — Cont. I. int.	4	—	21	6	42
— — Cont. II. int.	5	—	3	52	41
Duratio totalis		—	6	53	2

V. *Transitus* ☿ 1835.

Temp. ver. med. Transit.	7	Nov.	8	31	4
— — Cont. I. ext.	—	—	5	55	28
— — Cont. II. ext.	—	—	11	6	39
— — Cent. I. int.	—	—	5	57	19
— — Cont. II. int.	—	—	11	4	48
Duratio totalis		—	5	11	11

VI. *Transitus* ☿ 1845.

Temp. ver. med. Transit.	8	Maji	7	43	8
— — Cont. I. ext.	—	—	4	24	4
— — Cont. II. ext.	—	—	11	2	12
— — Cont. I. int.	—	—	4	27	50
— — Cont. II. int.	—	—	10	58	26
Duratio totalis		—	6	38	8

VII.

VII. Transitus ☿ 1848.

Temp. ver. med. Transit.		9 Nov.		2h	8′	35″
—	—	Cont. I. ext.	8	—	23	25	27
—	—	Cont. II. ext.	9	—	4	51	43
—	—	Cont. I. int.	8	—	23	27	12
—	—	Cont. II. int.	9	—	4	49	58
	Duratio totalis		—		5	26	16

VIII. Transitus ☿ 1861.

Temp. ver. med. Transit.			11	Nov.	19	43	20
—	—	Cont. I. ext.	—	—	17	40	49
—	—	Cont. II. ext.	—	—	21	45	51
—	—	Cont. I. int.	—	—	17	43	8
—	—	Cont. II. int.	—	—	21	43	32
	Duratio totalis		—		4	5	2

IX. Transitus ☿ 1868.

Temp. ver. med. Transit.			4	Nov.	19	37	46
—	—	Cont. I. ext.	—	—	17	48	34
—	—	Cont. II. ext.	—	—	21	26	58
—	—	Cont. I. int.	—	—	17	51	14
—	—	Cont. II. int.	—	—	21	24	18
	Duratio totalis		—		3	38	24

X. Transitus ☿ 1878.

Temp. ver. med. Transit.			6	Maji	7	7	40
—	—	Cont. I. ext.	—	—	3	19	11
—	—	Cont. II. ext.	—	—	10	56	9
—	—	Cont. I. int.	—	—	3	22	24
—	—	Cont. II. int.	—	—	10	52	55
	Duratio totalis		—		7	36	58

XI. Transitus ☿ 1881.

Temp. ver. med. Transit.			7	Nov.	13	20	0
—	—	Cont. I. ext.	—	—	10	39	1
—	—	Cont. II. ext.	—	—	16	0	59
—	—	Cont. I. int.	—	—	10	40	48
—	—	Cont. II. int.	—	—	15	59	12
	Duratio totalis		—		5	21	58

XII. Transitus ☿ 1891.

Temp. ver. med. Transit.	9 Maji	14h	28′	57″
— — Cont. I. ext.	— —	11	56	27
— — Cont. II. ext.	— —	17	0	47
— — Cont. I. int.	— —	12	1	27
— — Cont. II. int.	— —	16	55	48
Duratio totalis	—	5	4	20

XIII. Transitus ☿ 1894.

Temp. ver. med. Transit.	10 Nov.	6	56	38
— — Cont. I. ext.	— —	4	17	20
— — Cont. II. ext.	— —	9	35	56
— — Cont. I. int.	— —	4	19	8
— — Cont. II. int.	— —	9	34	8
Duratio totalis	—	5	18	36

Observationes astronomicæ Parisiis habitæ a D. *Mechain*.

				Temp. ver.			
1800.	29 Aug.	Imm.	II.	15h	45′	4″	II prope I.
	27 Sept.	Imm.	I.	16	14	1	vent. tub. agitante
	20 Oct.	Imm.	I.	16	29	14	cœl. vald. seren.
	26 Oct.	Em.	IV.	13	1	46	
	29 Oct.	Imm.	I.	12	51	50	♃ aliqu. tremul.
	9 Nov.	Imm.	III.	17	33	58	vent. valid.
	12 Nov.	Imm.	I.	16	37	50	aura pacata.
	28 Nov.	Imm.	I.	14	49	2	♃ tremul.
	10 Dec.	Imm.	II.	17	11	21	♃ nubibus tectus
	14 Dec.	Imm.	I.	12	56	25	obs. vald. dub.
	15 Dec.	Imm.	III.	13	12	12	♃ bene terminat.
	23 Dec.	Imm.	I.	9	14	47	obs. fors. dubia.
1801.	6 Jan.	Imm.	I.	12	55	27	ad disc. ♃
	8 Jan.	Imm.	I.	7	23	9	aura pacata.
1800.	4 Jul.	Imm.	43 Oph.	10	33	4	moment. obsc.

Obliquitas eclipticæ 1800.

Circa solstitium æstivum 92 observationes dederant obliquitatem mediam — — 23° 27′ 59″5
Circa solstitium brumale 94 observationes eandem dederant — — — 23 27 49 2

Eclipſes Solis potiſſimum Upſaliæ obſervatæ.

				h	'	"		
1775.	26 Aug.	*Upſal.*	Finis Ecl. ⊙	5	49	34	5 t. v.	Mallet
					—	35	—	Proſperin
						35	—	Trigdun
						33	—	Rotheram
		Lundini		5	25	20	—	Lidtgren
		Sweaburgi		6	19	33		
1787.	15 Jun.	*Upſal.*	Init. Ecl. ⊙	5	5	45	3 —	Proſperin
			Finis —	6	48	28	8 }	— —
				—	—	28	8 }	Schilling
1788.	4 Jun.	*Upſal.*	Init. Ecl. ⊙	9	1	58	mane	Proſperin
				—	2	7	—	Schilling
			Finis	10	32	45	—	Proſperin
				—	—	43	—	Schilling
1791.	3 Apr.	*Upſal.*	Init. ⊙ Ecl.	1	52	22	5 —	Proſperin
					—	34	5 —	Nordmark
			Finis	4	26	37	—	Proſperin
						34	—	Troil
						34	5 —	Swanberg
						26	5 —	Nordmark
1793.	5 Sept.	*Upſal.*	Init. Ecl. ⊙	11	13	28	mane	Proſperin
			Finis	2	7	17	veſp.	Proſperin
						19	—	Mallet
						9	—	Nordmark
		Lundini	Init.	10	50	1 }	—	Lidtgren
			Finis	1	51	46 }		
1797.	24 Jun.	*Upſal.*	Init. Ecl. ⊙	5	35	11	3 —	Proſperin
						13	3 —	Nordmark
						8	3 —	Holmquiſt
			Finis	7	14	13	—	Proſperin
				—	—	11	—	Landeſeck
						7	—	Holmquiſt
						7	—	Bredman
					13	58	—	Nordmark
1801.	30 Mart.	*Amſtelodam.*	Em. α ♍	15	29	19	t. med.	

Dies Mens.	Ortus Cerer. appar. H.	M.	Temp. ver. culminat. H.	M.	Longitudo geoc. sole culmin. G.	M.	Latitudo geoc. sole culmin. G.	M.	Declinat. sole culmin. G.	M.	Occasus Cerer. appar. H.	M.
Januar. 1805.												
1	0	7	5	36	2♈	41	9A	11	7A	21	11	5
7	23	42	5	15	4	10	8	48	6	24	10	48
13	23	16	4	54	5	45	8	27	5	27	10	32
19	22	51	4	34	7	28	8	7	4	20	10	17
25	22	28	4	15	9	16	7	48	3	28	10	2
Febr.												
1	22	1	3	54	11♈	27	7A	27	2A	19	9	45
7	21	41	3	37	13	25	7	10	1	17	9	33
13	21	18	3	20	15	29	6	55	0	16	9	20
19	20	58	3	5	17	35	6	39	0B	46	9	10
25	20	38	2	50	19	45	6	25	1	49	9	0
Mart.												
1	20	25	2	40	21♈	13	6A	15	2B	29	8	53
7	20	6	2	26	23	24	6	1	3	30	8	44
13	19	48	2	11	25	45	5	49	4	32	8	34
19	19	30	1	57	28	3	5	37	5	32	8	24
25	19	12	1	44	0♉	24	5	26	6	32	8	16
April.												
1	18	52	1	29	3♉	11	5A	15	7B	36	8	6
7	18	35	1	16	5	35	5	4	8	36	7	57
13	18	17	1	3	8	0	4	54	9	33	7	49
19	18	0	0	50	10	26	4	43	10	28	7	40
25	17	42	0	37	12	53	4	34	11	21	7	32
Maj. ☍ die 9.												
1	17	24	0	24	15♉	23	4A	23	12B	16	7	22
7	17	8	0	10	17	51	4	14	13	6	7	12
13	16	45	23	51	20	19	4	5	13	54	6	57
19	16	28	23	38	22	47	3	57	14	40	6	48
25	16	10	23	24	25	15	3	49	15	23	6	38
Jun.												
1	15	48	23	7	28♉	8	3A	38	16B	12	6	26
7	15	32	22	53	0♊	35	3	30	16	51	6	16
13	15	13	22	38	3	2	3	21	17	28	6	3
19	14	55	22	23	5	29	3	13	18	3	5	51
25	14	37	22	8	7	55	3	4	18	36	5	39

Dies Menf.	Ortus Cerer. appar.		Temp. ver. culminat.		Longitudo geoc. fole culmin.		Latitudo geoc. fole culmin.		Declinat. fole culmin.		Occafus Cerer appar.	
	H.	M.	H.	M.	G.	M.	G.	M.	G.	M.	H.	M.
					Jul.							
1	14	19	21	53	10 ♊	20	2A	56	19B	8	5	27
7	14	2	21	38	12	44	2	47	19	36	5	14
13	13	45	21	24	15	7	2	39	20	2	5	3
19	13	28	21	9	17	28	2	30	20	24	4	50
25	13	13	20	56	19	47	2	21	20	45	4	39
					Aug.							
1	12	56	20	40	22 ♊	27	2A	10	21B	6	4	26
7	12	39	20	25	24	42	2	0	21	22	4	13
13	12	25	20	12	26	54	1	49	21	36	4	1
19	12	11	20	0	29	3	1	39	21	49	3	49
25	11	56	19	47	1 ♋	9	1	28	22	0	3	38
					Sept.							
1	11	39	19	30	3 ♋	31	1A	15	22B	10	3	23
7	11	25	19	18	5	28	1	3	22	18	3	11
13	11	11	19	5	7	20	0	50	22	23	2	59
19	10	56	18	51	9	6	0	37	22	33	2	46
25	10	41	18	36	10	47	0	22	22	40	2	31
					Octob.		□ die 7.					
1	10	26	18	21	12 ♋	21	0A	7	22B	47	2	16
7	10	10	18	6	13	47	0B	9	22	55	2	2
13	9	52	17	49	15	4	0	26	23	4	1	46
19	9	33	17	31	16	13	0	45	23	15	1	29
25	9	15	17	14	17	9	1	4	23	27	1	13
					Novemb.		ftationar. die 17.					
1	8	49	16	51	18 ♋	2	1B	30	23B	44	0	51
7	8	26	16	29	18	32	1	53	24	3	0	32
13	8	1	16	6	18	49	2	18	24	25	0	11
19	7	34	15	42	18	52	2	44	24	50	23	50
25	7	5	15	16	18	41	3	11	25	19	23	27
					Decemb.							
1	6	35	14	50	18 ♋	15	3B	40	25B	52	23	3
7	6	3	14	20	17	31	4	9	26	27	22	37
13	5	27	13	49	16	34	4	38	27	3	12	11
19	4	51	13	18	15	26	5	7	27	41	21	45
25	4	16	12	47	14	9	5	36	28	17	20	18